

The Mirror, The Rabbit, and The Bundle
“Accession” Expressions
from the Classic Maya Inscriptions

Linda Schele and Jeffrey H. Miller



DUMBARTON OAKS STUDIES IN PRE-COLUMBIAN ART AND ARCHAEOLOGY | 25

THE MIRROR, THE RABBIT, AND THE
BUNDLE:

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FROM THE CLASSIC MAYA INSCRIPTIONS

LINDA SCHELE
AND
JEFFREY H. MILLER

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Introduction

THE READINGS and interpretations of the “accession” expressions presented in this paper were developed during the Segunda Mesa Redonda de Palenque, held in December 1975, in Palenque, Chiapas. Among the participants in that conference were Jeff Miller and myself. Several months earlier Jeff had begun field work for his dissertation on the inscriptions of Piedras Negras. Because he was in the Maya area, Jeff came to the conference a week early in order to talk with other epigraphers about the material he had gathered in preparation for his dissertation research. Among this material were copies of many of Ian Graham’s field drawings, the perusal of which resulted in many hours of vigorous debate and, eventually, in many of the ideas that will be presented here.

During this week of work, Jeff agreed to read and criticize the paper I intended to give at the conference, and in the process, he made the visual identification of r617a as a “mirror.” Merle Robertson and I talked a reluctant Jeff into giving a preliminary report of his findings to the conference. Fortunately this informal talk was tape-recorded, for Jeff died in Merida several months later. The arguments in the first third of this paper are based on his talk and on letters written to me and to others before his death. With the approval of his parents and his faculty and colleagues at Yale, I present them here in his name. Although the body of information available on the “mirror” glyph has grown immensely since Jeff’s death, much of the material presented in

this paper is based directly on his informal talk, and I hope that Jeff would look with approval on the paper in its developed version.

In our conversations at Palenque, Jeff and I often discussed the approaches to and method for the study of Maya hieroglyphic writing. Basic to both of our approaches is the belief that the glyphs can be read, and that the reading of the glyphs can offer an opening into the understanding of the fabric of Maya thought and culture. He believed in an extraordinarily rigorous method, grounded in the study of historical linguistics and in the structure and grammar of Maya languages. He was also a “seer,” who used his eyes to identify and recognize correlations between iconography and hieroglyphic writing.

All three of the arguments presented here initiated with the visual identification of the physical model for particular graphemes. The evidence presented in favor of the suggested interpretations is drawn from many different sources, including the historical approach pioneered by Heinrich Berlin and Tatiana Proskouriakoff, the detection of substitution patterns developed by J. Eric S. Thompson, the phonetic approach presented by Yuri Knorozov, and the linguistic evidence derived from ethnohistorical sources and the data of historical linguistics. Jeff Miller and I are both “phoneticists,” and linguistic readings will be presented that are both phonetic and logographic.

I wish to express special thanks to Floyd Lounsbury, David Kelley, and Peter Mathews. At the beginning they were extremely skeptical

of the proposed readings, and have been devastating and stubborn critics. The research for these readings has taken over four years, and the vast majority of the detailed evidence resulted from my often desperate attempts to answer their objections. I would also like to thank Ian Graham, who volunteered to correct an early draft of this paper; he leads a complicated and

busy life yet read this paper with concentration and detail. Brian Stross contributed important linguistic information to the paper and served as a helpful critic. And finally, I would like to thank Elizabeth Benson and Elizabeth Boone who patiently allowed me to update and rewrite the manuscript until the moment the editing process began.

Part 1: T617a as *Nen*, “Mirror”

THE INSCRIPTIONS of the Group of the Cross at Palenque record the ancestral and political history of the ruler, Chan-Bahlum (born 9.10.2.6.6 2 Cimi 19 Zotz', acceded 9.12.11.12.10 8 Oc 3 Kayab, and died 9.13.10.1.5. 6 Chicchan 3 Pop) (Mathews and Schele 1974). Among the events celebrated in these texts is one that occurred to Chan-Bahlum and to one of his ancestors when each was six years of age. In both cases, T617a is used as a part of the verbal expression that records this childhood rite.

Tablet of the Sun

Although the childhood event is recorded on the main tablet of all three temples of the group, it is featured on the Tablet of the Sun at 017–Q9 (Fig. 1a). The passage opens with a Distance Number of 7.6.12.3, which is counted from the Calendar Round Date (P2–Q3) 12 Ahau 8 Ceh (9.3.1.15.0). The event expression at P3–Q3 is followed by the name of the subject, Kan-Xul, a name glyph found both in the ancestral texts of the Tablet of the Cross and Sarcophagus edge (Lounsbury 1974) and in the Late Classic text of the Palace Tablet. Since the date above is tied chronologically to the lahuntun 9.10.10.0.0 at the end of this passage (Q14–Q15) it is clear that the Long Count position of 12 Ahau 8 Ceh is 9.3.1.15.0, and the protagonist is, therefore, the ancestral ruler for whom the Late Classic Kan-Xul was named. The birth and accession of Kan-Xul I is recorded on the Tablet of the Cross (S13–

S17) as 9.2.15.3.8 12 Lamat 6 Uo and 9.4.14.10.4 5 Kan 12 Kayab, respectively (Fig. 1b); his age at the time of the childhood event was, therefore, 6.11.12 or 6 years, 200 days.

The middle section of the Tablet of the Sun passage reestablishes the position from which the earlier Distance Number is to be counted. Q4 is an Anterior Date Indicator which in this case stands not before a date, but rather before a restatement of the event. Q6 is the Posterior Date Indicator which functions here to mark the following date, 9 Akbal 6 Xul, as the later of the two that appear in this clause. The date is then followed at P7 with the event (verb), but the subject of this verb has been deleted and the verbal phrase is gapped to the succeeding one. Note that the verb written at P7 is identical in form to the previous verb at P3; however, T126, the Anterior Event Indicator, which marks the first verb as the earlier of two events, is not included in the second version.

This first clause is completed with a Distance Number, which appears as an ordinal construction (“on the fifth day later”) at Q7, and which is followed by the verbal phrase *yoc'te k'in-k'in* (“[he] became the sun” or “[he] entered as the sun”) and the protagonist of both events, Chan-Bahlum (P9). Since Chan-Bahlum’s birth date is recorded at P12–P13 and on the Tablet of the Foliated Cross (Mathews and Schele 1974: 66) as 9.10.2.6.6 2 Cimi 19 Zotz', his age at the time of the 9 Akbal 6 Xul event was 6.2.17 or 6 years, 25 days. The chronology for both the earlier and later childhood events is as follows:

9.	2.15.	3.	8	12	Lamat	6	Uo	Birth of Kan-Xul I
								Age at childhood event
9.	3.	1.15.	0	12	Ahau	8	Ceh	Childhood event
9.10.	2.	6.	6	2	Cimi	19	Zotz'	Birth of Chan-Bahlum
								Age at childhood event
9.10.	8.	9.	3	9	Akbal	6	Xul	Childhood event

The 9 Akbal 6 Xul event is written in ten separate phrases throughout the inscriptions of the Group of the Cross (Schele n.d.a). These ten different versions utilize a restricted number of components that appear in various combinations, of which several can now be shown to be in direct reference to the piers on the Temple of Inscriptions (Robertson 1979; Schele n.d.a). In the versions discussed above, the verb is composed of the T713a hand over which is shown the T617a grapheme under discussion. The first occurrence of this verb precedes a prepositional phrase which is similar to Proskouriakoff's Affix Cluster, a component of T684 inaugural and T644a seating expressions. The same prepositional phrase (T103.765a:188) that appears after the T617a:713 verbal glyphs also appears at Q17. The animal head that appears in both of these prepositional phrases occurs as an affixed verb at Q13 where arithmetically it must refer to the 9 Akbal 6 Xul event written with the T617a:713a verb at P7 (Fig. 1a).

The animal head that appears in these prepositional phrases and in the verbal form can now be identified (Schele n.d.a) as a version of the *oc* sign (T765a) because it occurs in direct substitution for the more normal *oc* head in the deity name *Bolon Yocle* on the tablet from Temple XIV (Fig. 1d). The glyph in front of the *oc* head (Q3, Q16) is T103, a sign that is found also in T644 seating expressions on the east panel of the Temple of Inscriptions and the Tablet of the 96 Glyphs as a substitute for the locative preposition *ti* (Fig. 1c). Lounsbury, Mathews, and I have recently found evidence that the phonetic value of T103 was *ta*, a preposition in the Tzeltalan languages. As a verbal glyph (P8 and Q13), *oc* functions as the verb "to enter" or "to become" (Schele n.d.a), and as the noun in a prepositional phrase (Q3 and Q16),

it records the indirect object of a verb or the office into which a child might be placed. Because both protagonists of this event were six years old at the time of the occurrences, I assume it is something like the designation of the child as the heir-apparent to the throne of Palenque. "To enter" and "enterer" seem appropriate descriptions of both the act and the office of heir-designation.

If the glyph at Q3 is a prepositional phrase recording the office assumed in some childhood dynastic rite, then the T617:713 glyphs at P3 and P7 must function as verbal phrases recording the action completed in reference to the office and protagonists of both events. The prepositional phrase is deleted from the second occurrence of the event (P7) because both the office expressed in the prepositional phrase and the subject of the verb (Chan-Bahlum) are to be understood from the context.

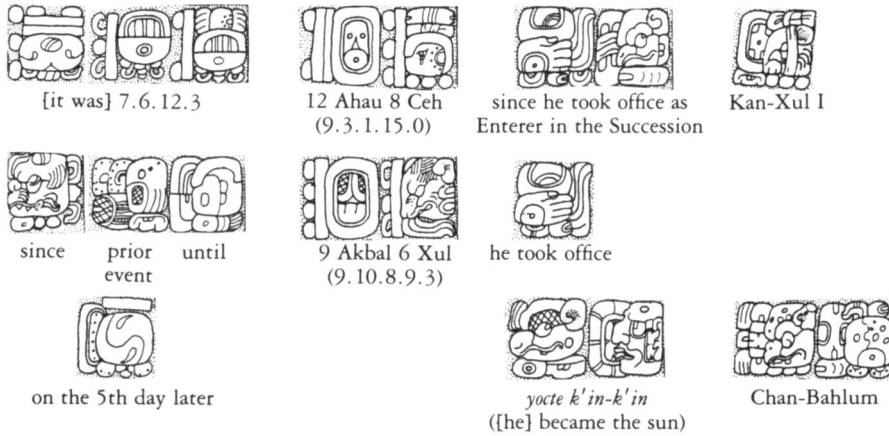
In summary, the Tablet of the Sun records two events that occurred to two protagonists when each was six years of age. Both subjects are recorded in other texts as having acceded to the throne of Palenque after reaching adult age (Kan-Xul at age thirty-eight and Chan-Bahlum at forty-eight). In both cases, the event is recorded with the glyph T617a:713a:130.116 and in the earlier occurrence, the verbal glyph appears with a prepositional phrase which includes *oc* ("enterer") as the term for the office assumed in the event.

Palace Tablet

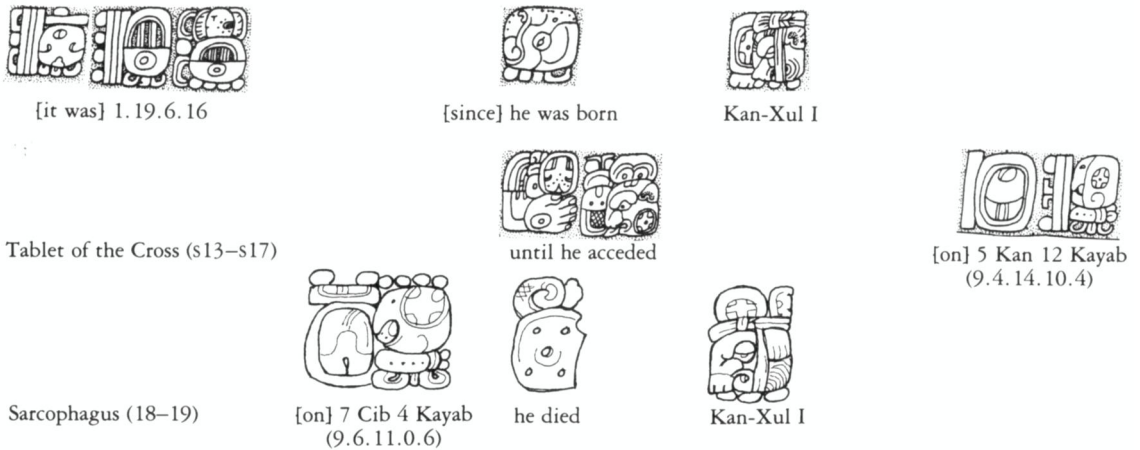
The same event glyphs (T617:713) also occur twice on the Palace Tablet, but in both cases the context is different from that discussed previously. The Palace Tablet records the birth and accession of Kan-Xul II (the Late Classic namesake of the Early Classic ruler discussed above) and his successor, Xoc. The accession of Kan-Xul II is recorded three times in the texts of Palenque (Fig. 2a) as occurring on 9.13.10.6.8 5 Lamat 6 Xul. In its first occurrence on the Palace Tablet (M15-P9), the event phrase contains the same T617a verb as found in the heir-designation

Figure 1

a. Texts from the Temple of the Sun with the T617a verb (016–Q9)



b. Texts recording the life of Kan-Xul I



c. T644 “seating” expressions with T103 as a locative preposition



d. Bolon Yocte from Tablet XIV



Figure 2

a. The “accession” texts of Kan-Xul I

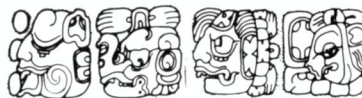
Palace Tablet (M15–P9)



(9.13.10.6.8) 5 Lamat 6 Xul

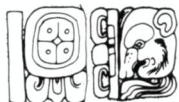


he acceded



Kan-Xul II

Palace Tablet (R4–Q8)



5 Lamat 6 Xul



he acceded



Kan-Xul II

Tablet of the 96 Glyphs (D4–D6)



5 Lamat 6 Xul



he was seated as *abpo* of the succession



Kan-Xul II

b. The birth, heir-designation, and accession texts of XOC

Palace Tablet (S1–U6)



(9.10.17.6.0) 1 Ahau 3 Uayeb



he was born



XOC



[it was] 2.17.2.0



[until] 8 Ahau 13 Xul
(9.13.14.8.0)



he took office



XOC

Palace Tablet (Q9–R18)



(9.14.8.14.15) 9 Men 3 Yax



he acceded



XOC



[it was] 3 days and 20 to



the “house” event



XOC

events on the Tablet of the Sun, but the contextual situation is very different. This 5 Lamat 6 Xul event is recorded on the Tablet of the 96 Glyphs at D4–D6 (Fig. 2a) as the T644a “seating” event and on the Palace Tablet at R4–Q8 (Fig. 2a) as the T713/757 “accession” event (Mathews and Schele 1974: 66–67, Fig. 7). The T617 event phrase recorded for 5 Lamat 6 Xul on the Palace Tablet must be equivalent or substitutable in some way for the other known “accession” phrases. At the time of his “accession,” Kan-Xul II was 2.18.7.8 or 57 years, 209 days of age. The event occurring to Chan-Bahlum and Kan-Xul I (for whom Kan-Xul II was named) at age six is apparently not the same event as the one that occurred to Kan-Xul II at fifty-seven. A proposed reading of the T617:713 event must accommodate this age difference.

The T617a:713 event is recorded a second time on the Palace Tablet in the secondary texts adjacent to the figures. These secondary texts and the last two columns of the main text (Fig. 2b) record the birth, a T617:713 event, and the accession of a ruler named XOC who appears to have been a third brother in the generation of Chan-Bahlum and Kan-Xul II (Schele 1979: 53, 57–61). His birth date is recorded as 9.10.17.6.0 1 Ahau 3 Uayeb, which is 5 years, 113 days after the birth of Kan-Xul II and 14 years, 280 days after that of Chan-Bahlum. At age 2.17.2.0 or 56 years, 106 days, XOC participated in the T617a:713 event which had previously occurred to the two older rulers. Since XOC is also recorded in an “accession” event (R8–R19) on a much later date, 9.14.8.14.15 9 Men 3 Yax, this event cannot be his accession; however, it occurred only 4.1.12 or 4 years 11 days after the accession of Kan-Xul II and might well be some dynastic event, such as the designation as heir-apparent of the 56-year-old third brother.

The contexts of the T617a:713 event as it functions at Palenque may be summarized as follows:

1) The event occurred to Chan-Bahlum and also to his Early Classic ancestor (Kan-Xul I)

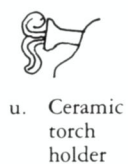
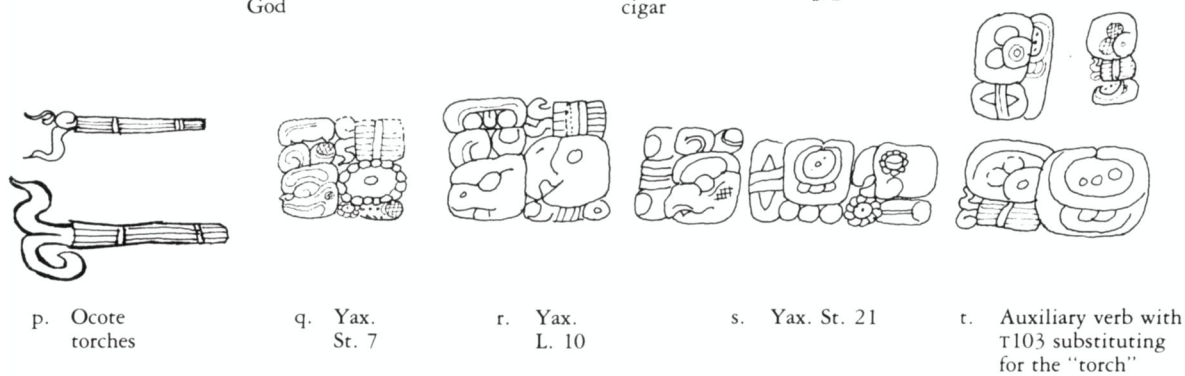
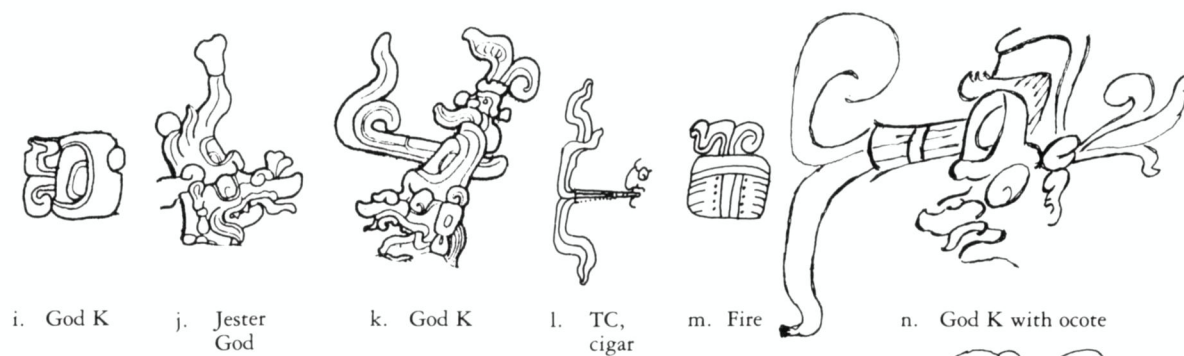
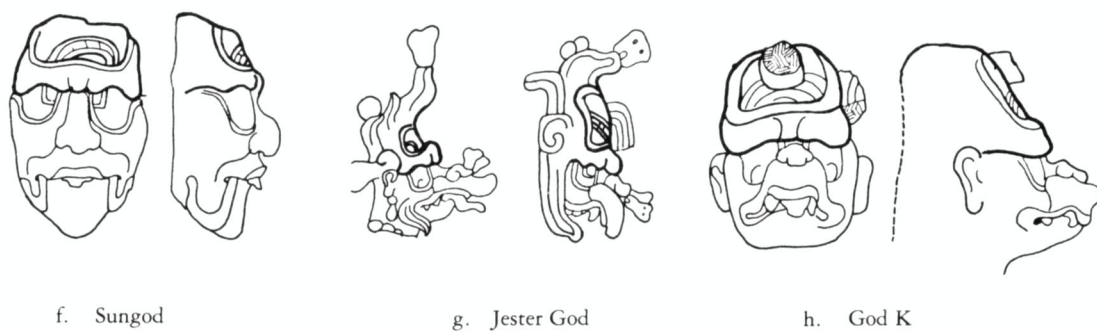
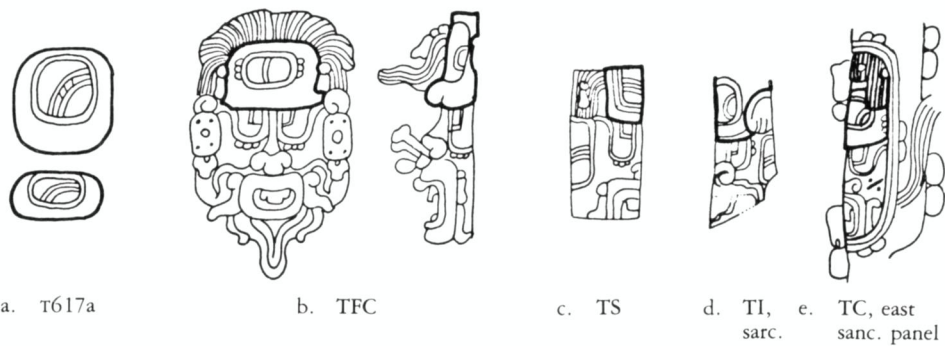
when each was six years old, an age by which many of the dangers of infancy had passed. The verbal glyph in the event expression is followed by a prepositional phrase that includes components (the locative T103 and T188) of Proskouriakoff’s Affix Cluster to the “inaugural” and “seating” expressions. The office in the childhood event is, however, recorded with the *oc* sign and appears to specify the office as that of the “enterer.”

2) An event written with the same T617a:713 verb is recorded as having occurred to Kan-Xul II at age fifty-seven, on the date which is recorded elsewhere in Palenque’s inscriptions as the day of “accession” and “seating” for Kan-Xul II.

3) The same event glyph appears in the records of XOC (Kan-Xul II’s successor) at age fifty-six in a context that makes unlikely an interpretation of “accession.” On the other hand, this event occurred only four years after the accession of Kan-Xul II, and, therefore, the event may have been the designation of XOC as the heir-apparent.

The examples of the T617a:713 event glyphs so far discussed include more than one grapheme in the glyph block. In all cases, T617a appears as if it were held in T713a, a hand shown from the rear view. In the four examples from Palenque, additional affixes are attached to these two graphemes as verbal suffixes. T126, the Anterior Event Indicator, also appears suffixed to the Temple of the Sun example at P7, marking it as the earlier of two events. T130.116 affixes appearing on the Tablet of the Sun, have been identified (Schele n.d.a) as the phonetic combination *-wan*, reconstructed by Terrence Kaufman and William Norman (n.d.) as the completive suffix for positional verbs in proto-Cholan. T181, the suffix appearing with T617:713 at O1 on the Palace Tablet, has been long recognized as a verbal affix; there is mounting evidence that T181 was phonetic *-ah* in the Classic script. T178:181 appear as the affixes on T617:713 at U4 on the Palace Tablet and can be found in substitution with the affix pattern T130.116, *-wan*, discussed above. T178 is the phonetic sign *la* and T181 is *-ah*;

Figure 3. The graphic origin of T617a



together they form the suffix *-lah*, the completive suffix for positional verbs in the Yucatecan languages and the inchoative *-l-* in Chol. In three of the four examples of T617:713, all involving probable heir-designation rites, the verbal suffixes suggest that the verb is positional; in the fourth, which is an 'accession', the affix is T181, a standard verbal affix that many epigraphers suspect may be a "completive" (past) or "perfective" (the action is terminated) suffix.

The verbal glyph under discussion is composed of T617a and T713 accompanied by verbal suffixes of various kinds. T613a (the back of a hand) also appears as a constant in the T617a/757 'accession' expression (Mathews and Schele 1974: 64–65). It seems likely that T713a appears in the T617a verb in the same function as in the 'accession' expression, and the two events phrases are, therefore, related in some way. In such a case, T617a would represent the variable element in the event under discussion.

The Grapheme

The T617a grapheme is composed of an oval shape with a second oval shown within the upper center of the sign (Fig. 3a). Curved diagonal lines, usually three in number (two thin outer and one thick inner), span the internal oval in a path moving from the lower left to right center or right lower. This oval shape is a familiar motif seen on the upper arms and legs and on the foreheads of supernaturals as "god-markings." The marks are most clearly seen and compared on the foreheads of the cross deities on the Tablet of the Foliated Cross (Fig. 3b) where the motifs are shown both in profile and in front view. The T617a motif, once identified, can be seen in profuse display, especially on the foreheads of the Jester God (Fig. 3g, j) God K (Fig. 3h, i, k) the God C variant of the Sungod on the Tablet of the Foliated Cross (Fig. 3b–e) and on the anthropomorphic variant of the Sungod (Fig. 3f).

T617a is especially important in the program of

attributes that distinguishes God K and can be seen in detail on a three-dimensional stucco of this god now in the Museum at Palenque (Fig. 3h). God K is the manikin scepter, GII of the Palenque Triad who was born on 1 Ahau in the text of the Tablet of the Foliated Cross of Palenque, and the protagonist of the 819 Day Count during the Classic period. His glyph is especially prominent as a part of royal name phrases, and he appears particularly in association with Late Classic rulership and blood-letting rites. As GII of the Palenque Triad, he can appear as a reclining infant figure, and in most glyphic contexts, he may be named solely by the T617a section of his forehead.

God K

The eighty-year long debate on the identification and function of God K has been summarized by Francis Robicsek (1978: 57–107). One of the most recent and important arguments on God K is Michael Coe's (personal communication, 1973) identification of God K as the Maya prototype for Tezcatlipoca, the "Smoking Mirror." Coe's suggestion is based on the identification of the forehead of God K (T617a) as a mirror penetrated by a smoking cigar, an observation supported in part by recent work on the linguistic origin of God K and his forehead motif.

Lounsbury (personal communication, 1976) has believed for several years that God K was the deity of the ninth day—Muluc in the Western Maya languages and Toh in the Eastern languages. Recently, Lounsbury noticed *toh* as a word for "mirror" in a new transcription by Robert M. Laughlin of a seventeenth century Tzotzil dictionary. The entry is as follows:

toj black flint (with which they make blades).
RML—The following entries have been placed under this root on the suspicion that *toj* also meant the black stone used for mirrors. The use of mirror for divination was widespread in Mexico, furthermore in modern Tzotzil occurs the phrase *ch'ul toj ch'ul nen*, which I had originally translated as "holy pine, holy mirror,"

TABLE 1. OBSIDIAN, 'LANCET', AND GLASS

YUCATEC	lanceta de pedernal <i>ta</i> (Vienna: 135r). <i>ta</i> lanceta o navaja de pedernal (Motul: 807). <i>ta</i> lanceta de sangrar, sangradera (San Francisco: 320).
LACANDON	<i>tah</i> obsidian, volcanic glass (Bruce 1979: 222).
CHOL	<i>tajñan</i> golpear una herida. <i>tahpun</i> afilar (Aulie and Aulie 1978: 109).
TZELTAL	<i>ta</i> navaja; <i>batzil tah</i> pedernal de que hazen las navajas (Guzman: 94r).
TZOTZIL	<i>toj</i> black flint (with which they make blades). <i>toj-liʔi</i> predict, prophesy; <i>toj-liʔibil</i> foretold, prophesied. <i>toj-liʔivan</i> prophesy; <i>jtoj-liʔi</i> diviner, prophet (Laughlin n.d.).
CHUH	chips of glass <i>tah</i> (Hopkins n.d.a).
MAM	pedernal <i>tza</i> (Reynosa 1916: 117).
QUICHE	<i>chay</i> knife, obsidian blade, pieces of glass. <i>cha</i> pieces of glass (Edmonson 1965: 25).
CAKCHIQUEL	piedra de que sacan navajas <i>chay</i> (Cakchiquel, Amer. 7). <i>chai ru</i> obsidiana, piedra cortante, cuchillo. <i>aj chai</i> soldado; <i>ru nabei chai</i> el capitan (Saenz 1940: 74).
KEKCHI	<i>cha</i> astilla de vidrio para sangrar (Sedat 1955: 60).
HUASTEC	<i>tah</i> punta de flecha (Larsen 1955: 61).

but which I now think means "holy flint, holy mirror." This phrase is used in ritual speech to refer to the scribes.

The black flint from which blades are made is almost certainly obsidian, since mirrors are also known to have been made from this stone. Laughlin's entry also points out that the terms for obsidian and pine are homophonous in Tzotzil. These two terms are also homophonous in most other Western Maya languages; however, the obsidian-pine terms in most of these languages is *tah*, rather than *toh* as in Tzotzil. The term for pine, and the torch made from it, is clearly recorded as *tah* (or its cognate *chah*), but the term for obsidian in many languages is more difficult to find since in many cases some figure of speech is used instead. However, the term survives in two other forms—as the word for 'blades' of various kinds and lancets for blood-letting, and as the term for slivers of glass. *Tah* can be found directly as the term for obsidian in Lacandon (Bruce 1979: 274) and Tzotzil and as the term for lancet and/or blade in Yucatec, Tzeltal, Tzotzil, and Chuh. In the Eastern Highland languages the

term for pine is *chah* while the term for obsidian is *chai* and for lancet *cha*. The Quiche still use a couplet for the four readers of the Passion story that is similar to the *ch'ul toj ch'ul nen* of Tzotzil. These readers are called *Ah Chah Lem* (Will Norman, personal communication, 1979), "He of Pine Mirror." Therefore, the terms for obsidian and pine (torch) are homophonous or nearly homophonous in all Maya languages, and in Tzotzil and Quiche modern couplets survive which juxtapose the obsidian term (from which dark mirrors were made) with the other standard terms for mirror (*nen* and *lem*). (See Tables 1 and 2.)

The mirror forehead of God K is always shown penetrated by an object. In the three-dimensional models from Burial 195 at Tikal, these objects are like thin stone celts, while in the model from Palenque, this object has an oval cross section (Fig. 3h). In pictorial presentation, this object can be shown alone, but in most instances it occurs with the same scroll that appears over the 'fire' glyph (Fig. 3m) and on the end of the object in the mouth of God L on the east sanctuary panel of the Temple of the Cross at Palenque (Fig. 3l).

TABLE 2. PINE TREE AND TORCH

YUCATEC	tea de pino <i>tahte</i> (Vienna: 191v). <i>tahche, tah</i> una yerba de cuyas ramas secas se hacen manojos para alumbrar como con hachas or teas (Pio Perez: 315). <i>tah</i> ciertas matas o yervas . . . se sus varillas secas se hazen . . . hachas o teas para alumbrarse (Motul: 821).
LACANDON	<i>täh teʔ</i> pine (Bruce 1979).
CHORTI	<i>tah teʔ</i> pine tree, pine torch (Wisdom n.d.).
CHOLTI	<i>tah, tah te</i> ocote, tea (Moran 1935: 48).
CHOL	<i>tah</i> pino, ocote (Aulie and Aulie).
TZELTAL	<i>tah</i> (el) pino; <i>tasjal tah</i> (el) pino de tea (Slocum and Gerdel 1976: 185).
TZOTZIL	<i>tah</i> candle, light, radiant, shine, sparkle, torch. <i>toh</i> pine, torch (Laughlin n.d.).
MOCHO	<i>tah</i> ocote (Kaufman n.d.).
CHUH	<i>tah</i> pitch pine (Mayers 1966: 295).
JACALTEC	<i>tah</i> pitch pine (Mayers 1966: 295).
KANJOBAL	<i>teʔ taj</i> the pine.
TECO	<i>ɕax (ɕaj)</i> pine (Kaufman n.d.).
MAM	<i>tzah</i> pitch pine (Mayers 1966: 295).
IXIL	<i>tzah</i> pitch pine (Mayers 1966: 295).
QUICHE	<i>chah</i> pine (Edmonson 1965:23).
CAKCHIQUEL	<i>chaj ru</i> pino, ocote (Saenz 1940). Tea de pino <i>chah</i> (Cakchiquel, Amer. 7).
POKONCHI	<i>chäh</i> pitch pine (Mayers 1966: 295).
POCOMAN	<i>chäh</i> pitch pine (Mayers 1966: 295).
KEKCHI	<i>chaj</i> ocote (Sedat 1955: 61).

This scroll surely represents the smoke (or flame) of fire and of a cigar. In several of God K's appearances, the forehead object is simply the smoke scroll (Fig. 3i) or a set of bound thin sticks with the smoke scroll at the end. The motif of bound sticks is an ocote torch (Fig. 3n-p) and can be shown to have been read as *tah*. Finally, an object with a flared rim and without reflection or darkness markings (Fig. 3u) is shown penetrating the forehead mirror of God K, and like the celt and ocote torch, it is shown with emerging flames or smoke. This object has been found in archaeological context in Petroglyph Cave, Belize where Dorie Reents (n.d.) has identified it as a ceramic holder for ocote pine slivers used in caves. The same form appears as torches in the Dresden codex (Fig. 3v).

Peter Mathews (personal communication, 1979) has observed that an ocote torch appears in

the name of a captive in the name phrase of Shield-Jaguar II at Yaxchilan on Stela 7 at pc4, and on Lintel 10 at c7 (Fig. 3q-r). The same captive reappears on Stela 15 at pg5-ph5, but the ocote torch has been replaced by T103 (the locative previously identified as *ta*), and T181 *ah*. Together these two signs (Fig. 3s) form a phonetic replacement *tah* for the logographic sign. The ocote torch also replaces T103 as an auxiliary verb (T516:103) recently identified by Josserand, Schele, and Hopkins (n.d.) (Fig. 3t).

The mirror forehead of God K can, then, appear with an ocote torch, with smoke (or flames) a ceramic torch holder with smoke, with a smoking cigar, or with a smoking celt. The mirror attachments all seem to function as phonetic complements to insure that the mirror is understood to be made of obsidian. The mirror alone could be made of any material and, therefore, a

celt is shown to penetrate it. Celts, like mirrors, can also be made of many different materials (flint, jade, etc); however, with smoke attached, only one stone can be read—only obsidian (*tah*) is homophonous with a word for torch (*tah*). The smoke scroll and the smoking cigar function in the same way, insuring that the material of the mirror is understood to be dark and, therefore, obsidian. Finally, the celt can be fully removed and replaced entirely by the torch or torch holder. One of God K's names in the Post-Classic period was *Ah Bolon Dzacab* as identified by Seler (1977: 14) but one of his Classic names was *tah (toh)* or *tahil (tohil)*,¹ and his forehead motif is an obsidian mirror.

The identification of the forehead motif as a mirror is further supported by Landa who described mirrors (Tozzer 1941: 89) as follows: "All the men used mirrors while the women had none; and to call each other cuckolds they said that the wife had put the mirror in the hair at the back of their heads." The usage of mirrors in dress is also recorded in the Motul Dictionary (746) as follows:

pakal nen ti tzuc poner los cuernos la muger al marido.

pakal nen ti tzuc to stitch mirror to the patch of hair bound at the back of the head, (like the mane or forelock of a horse).

If the mirror is placed at the back of the head to indicate that a man had been made a cuckold, it suggests that mirrors were a part of male costuming and that normally they were worn at the front of the head in exactly the position of the T617a element on God K's forehead. Furthermore, in Classic portraits the Jester God (who is also marked by a forehead mirror, but one conspicuously without the 'obsidian-dark' markings

¹The reading *tahil* or *tohil* (from Tzotzil) is proposed for the version of God K in which only the forehead mirror occurs because in a great majority of examples the mirror is accompanied by T178 *-la*, which appears to function in this context as a *-VI* suffix.

of God K) is frequently shown on the forehead of rulers. Bonampak Sculptured Panel 1 shows the presentation of the Jester God (the bright or clear mirror) headband in accession ceremonies. T617a is the forehead motif of the Jester God as well as of God K.

Linguistic Data

Two principal terms for "mirror" exist in the Mayan languages—*nen* in the Western and Central languages and *lem* in the Eastern languages. The Vienna Dictionary (99r), the earliest Yucatecan source, has the following entries on "mirror":

espejo para mirarse *nen*.

espejo ser y servir de espejo a otra *neninah*, *nentah*, *nenma*.

tengo a dios y al p(adr)e por espejo *in nen ma dios*, *in nen ma padre*.

tomarse por espejo las obras del los santos y servitean de espejo *lay u beelob*, *sanctosob*, *bina ch'ab nentelo*.

toma mi espejo para servirte del *ch'a in nen*, *anen in*.

The Motul Dictionary (669–670) has an important entry which is related to the use of T617a in the heir-designation and accession rites at Palenque. The entry is as follows:

nen, *in nen*, *a nen* espejo.

u nen cab, *u nen cah* el sacerdote, cacique, gobernador de la tierra o pueblo, que es espejo en que todos se miran.

In the second phrase above, *nen* (mirror) is used as a title for priests and chiefs, describing them as the mirror in which all see themselves. Literally, the phrase describes the title-holder as the "mirror of the world" and "the mirror of the pueblo (or people)." A Quiche entry for *nem* (which is not the Quiche word for "mirror") appears to be related to the Yucatec title as a term for "succeed in office" (Edmonson 1965: 78).

In Tzotzil, *nen* is used in ritual speech "refer-

ring to scribes who are credited with special visual powers" (Laughlin 1975: 251). In Yucatec, *nen* also means "to imagine," "to contemplate," "to think," and "to meditate," as follows:

Pio Perez (240):

nenol consideracion.

nenolal meditacion.

nenolbil que ha sido ó debe ser considerado, contemplado, meditado.

nenoltah contemplar, considerar, imaginar, pensar, meditar.

Motul (669–670):

nenma ol tener puesto el corazón en alguna cosa y inclinarse así con affecto; o estar embevecido y ocupado en ella ymaginándola con vehemencia.

nen ol lo mismo que *nenma ol* y considerar y contemplar.

nen olal la tal ymaginación embebecimiento, ocupación y inclinación vehemente a algun ejercicio y concideración así.

Lem, The Eastern Mayan term for "mirror," also has a secondary set of meanings or is related to homophonous terms as follows:

Quiche:

lemoh: v.

lem declare, manifest, agree, arrange.

lemo reflect, mirror.

lemölet gleam, shine (Edmonson 1965: 66).

Cakchiquel:

lem tu narrar, relatar.

lema narración, cuento.

lemo espejo, anteojos.

lemow ti verse en la espejo.

lemowabal espejo.

lemouj espejo, cristal (Saenz 1940: 248).

Kekchi:

lem espejo.

lemanc mirar.

lemlotc brillar, resplandecer, despedir rayos de luz.

len dico, dicen (partícula que se usa cuando no se sabe quien o cuando fue dicho) (Sedat 1955: 100).

The two mirror terms, *nen* and *lem*, seem to be interrelated in many of these languages through the function of *lem* as the root for "lightning," "gleam," and "shine." The following entries illustrate this relationship:

Yucatec:

lemba resplandecer, reluzir y resplandar.

lemba relampago y relampaguear.

lemba resplandor, brillo, relampago (Motul: 549).

lembanah resplandecer, relampaguear, relumbrar, relucir.

lembail brillantez, resplandor.

lemlemci brillante, reluciente, replandeciente, bruido (Pio Perez: 198).

Chol:

lem-law brillar (Schumann 1973: 86).

lem flashing, sparkling, shining (Attanasi n.d.).

lembal aguardiente.

lemla flamante (Aulie and Aulie 1978: 72).

lem lem ña reflection of lightning in clouds, summer heat lightning (Linda Schele, field notes, 1978).

Tzeltal:

lem brillar, encender (Robles 1966: 47).

leblugh quinal relampaguear.

xleblaghan relumbrar, resplandecer (Guzman n.d.).

Tzotzil:

leblahet flashing (lightning).

lebleh flaring up suddenly (flame, lightning) (Laughlin 1975: 207).

leblajet shine, sparkle.

leblajet 7osil flash (lightning).

leblon 7osil flash (lightning).

leblajetel lightning.

leblonet shine.

lebluj shine (Laughlin n.d.).

lebuel relampaguear.

slebuel chauce relampago, rayo.

ta xlebuuj, ta xlebula brilla, relampaguea.

xleblajet relampaguea, brilla, reluce.

xleblun brilla, reluce, refleja, flamea (Delgaty and Sanchez 1978: 76).

Quiche:

lemölet gleam, shine (Edmonson 1965: 66).

Kechi:

lemlotc brillar, resplandecer, despedir rayos de luz (Sedat 1955: 100).

Since the Huastec term for mirror is *lam*, it seems likely that the proto-Mayan word for mirror was *lem* and that *nen* was a later innovation which affected the Western and Central Maya languages. Furthermore, the entries above suggest that while the term for mirror changed to *nen*, the term for something bright, gleaming, and reflective, and something that throws beams of light (all characteristic behavior of mirrors and highly polished or reflective surfaces) remained based on the proto-Mayan root, *lem*.

In summary, the Western Mayan term for “mirror” is *nen* while in the Eastern Mayan languages, it is *lem*. *Nen* is found in Yucatec phrases that denote rulers and persons of importance as the “reflection of the world (or people),” and in Quiche, *nem* is found as “succession in office.” In Yucatec, *nen* appears in derived forms as terms for “to think,” “to imagine,” “to contemplate,” and “to meditate.” The association of *nen* with references to rulers and with the taking of office relates to the behavior of T617a “mirror” at Palenque where it appears in contexts of accession and heir-designation. The mirror glyph appears in the verbal glyph for an event which occurs to Kan-Xul II on the same day as T644 “seating” and T713/757 “accession” events and should be, therefore, an alternative expression for the act of

taking the throne of a Maya site. And *nen* is used in titles of Yucatec priests, chiefs, and governors which describe them as “mirror of the people.” Furthermore, *nem* appears in Quiche as a term of “to succeed in office” without the specification of the particular office. This general function of *nen* as a title for persons of different vocations and without specification of particular office allows for the appearance of the mirror glyph in the expression for heir-designation. It should be noted that in those cases, the verb (T617a:713) is followed by a prepositional phrase which records the office as *ta yoc le*, “as Enterer of the Succession” (see the following section on the T684 bundle glyph for a discussion of T188 as *le*, a term for “succession”).

Pictorial Contexts

The “mirror” grapheme has been shown to appear as a major feature in the diagnostic traits of God K and the Jester God (both major gods of Classic rulership) as well as other deities. The prominence of both of these deities in the regalia and accouterments of royal portraiture is relevant. If both gods participate in royal iconography and mythology, it is little wonder that the forehead motif of each becomes a symbol of accession to office in general and to the throne in particular.

As a “god-marking,” T617a appears on the bodies of many different entities in a pattern that reflects the contrast between the Jester God (the bright mirror) (Fig. 3g, j) and God K (the obsidian or dark mirror) (Fig. 3h, k). In Early Classic examples, such as on Stela 31 of Tikal (Fig. 4k), the mirror of God K appears with an infix of two loops, which along with T617a, is used to mark not only supernaturals, but also objects of special value such as the cross on the sarcophagus at Palenque (Fig. 4l). Both of these motifs are always shown at the edge of whatever shape they mark because they represent a profile view of a convex object. Both can be understood if they are seen as

Figure 4. Belt motifs and mirrors

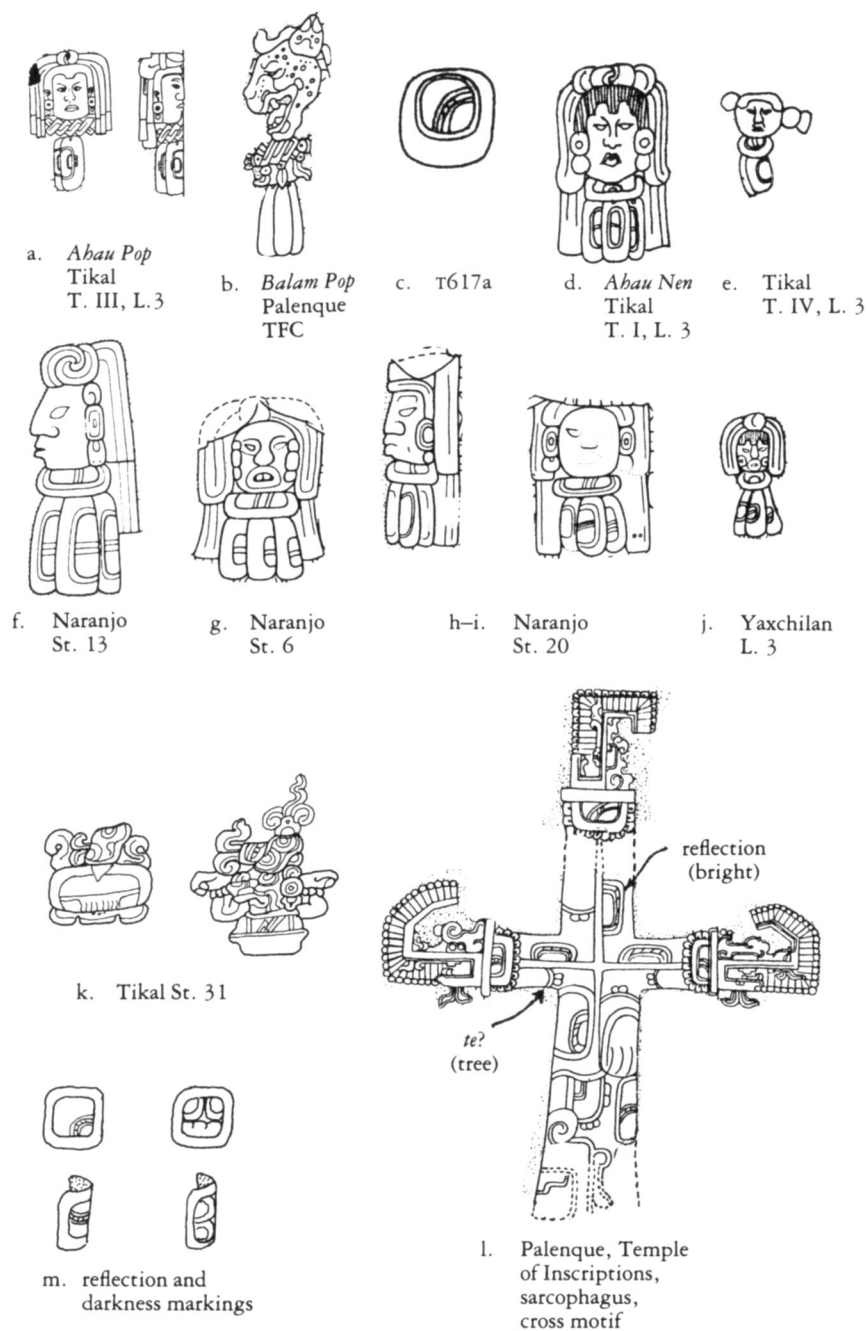
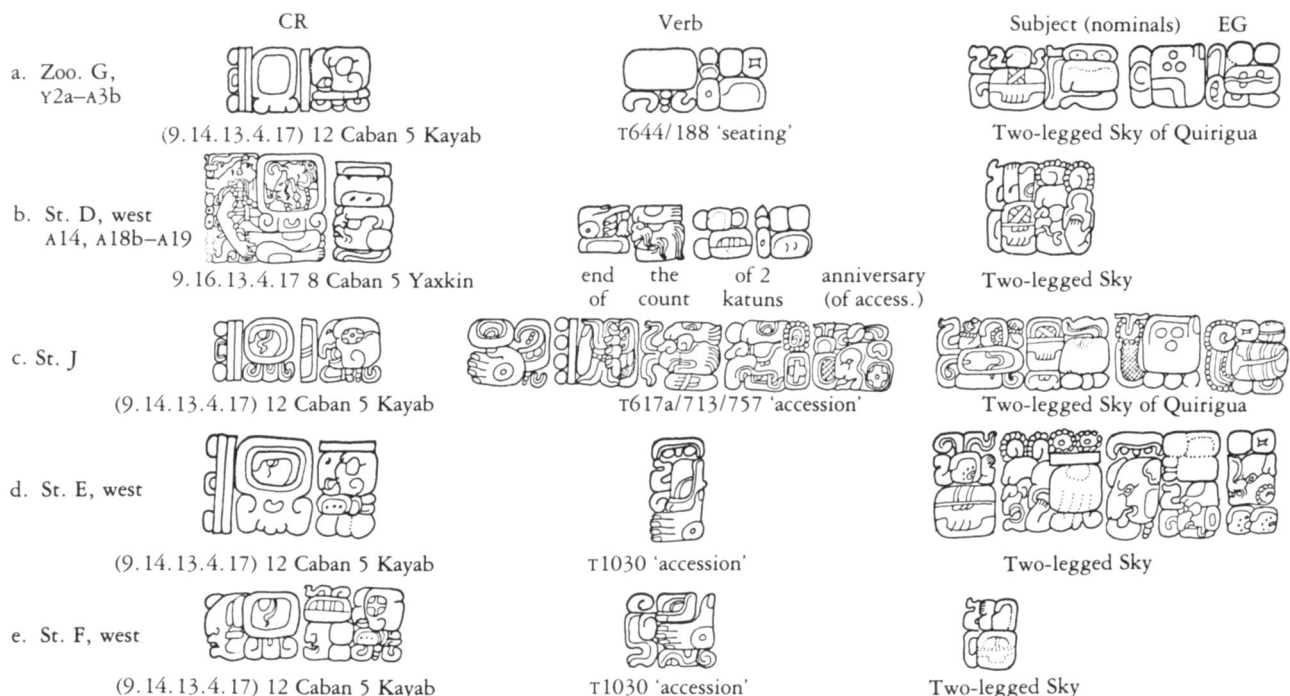


Figure 5. Quirigua texts









one-half of a full mirror and *akbal* sign (Fig. 4m). The contrast implied between these two motifs is the contrast between something reflective and something obscure and dark. The diagonal lines which are characteristic of the mirror sign represent reflection lines on the concave section of the mirror. The two loops of the opposite motif represent the upper half of an *akbal*.

The T617a mirror sign also appears prominently in the head motifs that decorated the belts of rulers throughout the Classic period. These motifs consist of three parts: 1) the T1000e head which appears as the head variant of the day sign and title *ahau*, a jaguar head, or the head of the Jaguar God of the Underworld; 2) a variable sign which is often *pop*

(mat), but which may also be a mirror or the T60 knot from the bundle motif; and, 3) a series of three oval shapes marked by reflection signs. This assemblage of objects has been found in Tomb 3 of Temple XVIII-A (Ruz 1962: 63–85, Fig. 11) and on top of the sarcophagus in the Temple of the Inscriptions (Ruz 1973: Figs. 184–185). The head in this belt motif was apparently made of jade mosaic and the three ovals are thin stone plaques. At Palenque the plaques could be made of limestone or flint, and at Tikal of jade (the Leiden Plaque is just such a belt plaque).

Lounsbury (personal communication, 1976) has proposed an interpretation for the T1000e head (or jaguar head) and mat combination as a title















DN		Verb	Subject	EG
				
[it was] 2. 18. 12. 18 from	(9. 15. 6. 14. 6) 6 Cimi 4 Zec	[to the next event . . .]		

Count	18. 3. 14	(to)	(9. 15. 6. 14. 6) 6 Cimi 4 Zec	event	Uaxacalahun Umul of Copan
					
			(9. 15. 6. 14. 6) 6 Cimi 4 Zec	event	Uaxacalahun Umul
					
			(9. 15. 6. 14. 6) 6 Cimi 4 Zec	event	Uaxacalahun Umul of Copan

symbol. The human head is marked by the hair cut and ear-piece (Fig. 4a, f, g) as the human variant of *ahau* which when combined with the mat sign reads *Ahau Pop*, “Lord of the Mat” (Fig. 4a), a well-documented title for Maya rulers. With the jaguar head, and presumably it is the head of the Jaguar God of the Underworld, the title is altered to *Balam Pop*, “Jaguar Throne (or Lord)” (Fig. 4b). In those instances where the mirror sign replaces the mat sign, the head motif marks the pictured person as *Ahau Nen*, “Lord of the Mirror,” a title now documented by the *u nen cab* reference to rulers in Yucatec, and by the importance of God K and the Jester God in royal iconography of the Classic period.

The $\tau 617a$ glyph, as part of an accession statement, appears prominently at Quirigua where it occurs both as the mirror and as the forehead of God K. David Kelley (1962b: 327–328) suggested “birth” as an interpretation of the “God K mirror-in-hand” event based on Seler’s identification of God K as *Ah Bolon Dzacab*. Kelley felt that *dzacab* (Yucatec for “maternal generation”) is close enough linguistically to the concept of birth to consider the God K even functionally equivalent to Proskouriakoff’s initial event. Proskouriakoff (1973: 167–168) and Thomas J. Shaw (1978) have since disagreed with Kelley’s suggestions by demonstrating that the day of the God K event, 9.14.13.4.17 12 Caban 5

Figure 6. T617a/757 ‘accession’ expressions

		T713/617a	9-fish-in-hand	T563 ‘fire’	T1030o	T757
a.	Quirigua St. J (9.14.13.4.17) 12 Caban 5 Kayab					
b.	Yaxchilan Str. 44 middle, upper (9.12.9.8.1) 5 Imix 4 Mac					
c.	Palenque Pal. Tab. (9.13.10.6.8) 5 Lamat 6 Xul		 equivalent (??) to 9-fish-in-hand and fire compounds			

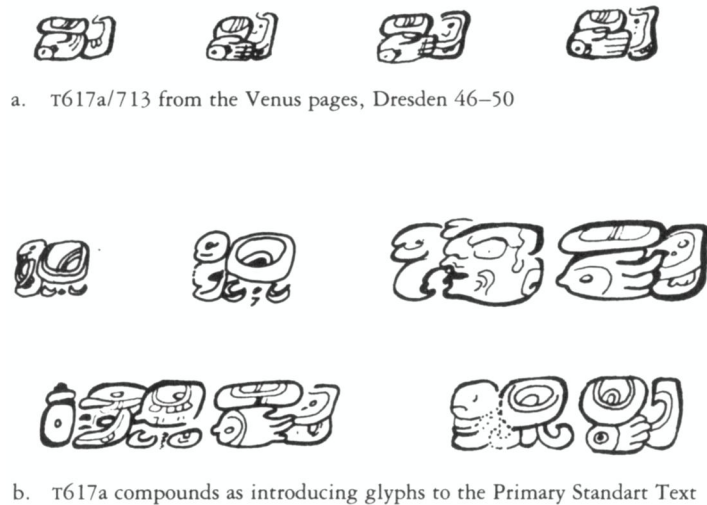
Kayab, is recorded on Zoomorph G (Fig. 5a) as the day of a “seating” event. Furthermore, the two katun anniversary of this date is celebrated in standard formula on Stela D (Fig. 5b). Proskouriakoff (1973: 168) suggested that the God K-in-hand events on Stelae E and F (Fig. 5d, e) “may indicate in this context that *Two-Legged-Sky* received the scepter [God K] at this time, which may be equivalent to saying that he was established in office.”

The “accession” phrase appearing on Quirigua Stela J (Fig. 5c) is one of the most interesting because it is parallel to an event recorded on the central lower step of Yaxchilan, Structure 44 and very similar to the accession expression for Kan-Xul II on the Palace Tablet at Palenque (Fig. 6). In all three cases, the first glyphs of the phrase are the T617a:713 event previously discussed. In these phrases the T617:713 verb appears with variables, the T1030-o title (I strongly suspect that T1030-o is the glyphic version of the Jester God) and T90.204:757 (to be discussed later). In the Yaxchilan and Quirigua example, the variables appear in two separate glyph blocks and are 9-Fish-in-

Hand (TIX.714.181 and XI.714) and a glyph with flame (or fire) and *xoc* (T122.205:102 and T122:563a.205.102). At Palenque, the variable contains two glyphs, but occupies one glyph block with a ‘capped *ahau*’ and a beastie with upturned snout (T535:102.nn:178). The Quirigua and Palenque examples are clearly recorded as occurring on a day which is elsewhere written as the day of a seating event so that there is little doubt that all three of these phrases record accession events—those of Two-legged-Sky of Quirigua and Kan-Xul II of Palenque. However, there is no name phrase after the Yaxchilan example; the accession phrase closes the inscription or may have continued onto the now-eroded riser of the step. Nevertheless, the identity of the protagonist of the Yaxchilan text is clearly Shield-Jaguar. Although his name is missing at the end of the text, he is the only person named in the previous clauses as the subject of a verb, and, therefore, is to be understood as the subject of the final clause of the text.

Nen, as part of an expression of ‘accession’ and ‘heir-designation’, is supported by the following

Figure 7



passage from the *Chilam Balam of Chumayel* (Roys 1933: 109–110):

In the first katun was born the only son of God; in the second katun, the Father. In the third katun was *Expleo-u-caan*, as he was called, who chastised him named *Chac Opilla* when he set up the heavens. *Enpileo-u-caan* was his name. *Expeo* was his name within the first noose of God. Hebones was the only son of God. [Like] a mirror he was borne astride on the shoulder of his father, on the stone of his father.

The last sentence is recorded in Yucatec as *Nen bin ti heclit tu celembal u yum tu tunil yume* and characterizes the presentation of the child of a deity as a “mirror.”

The 617:713 also appears as the principal event glyph on the Venus pages of the Dresden Codex, and it is one of several introductory glyphs to the Primary Standard Sequence on pottery. In the Dresden, D46–50 (Fig. 7a), the *nen* compound occurs in section b as well as in the text above the spearing scenes. *Nentah* is entered in the Pio Perez Dictionary as “espejear” or “to shine” so that the spearing scene on D46f might be paraphrased as: “It shines in the east, God L, the Great Star (Venus); God K is speared” and on D47f as: “It

shines in the east, *Lahun Chan*, the Great Star (Venus); *Chac Bolay* is speared.” However, the same “mirror” event occurs as the verb in adjacent sections which record the four phases of Venus, during two of which Venus is not visible. I suspect, therefore, that the *nen* verb on the Venus pages may refer to “succession in office” as much as to “shines.”

T617a appears in two distinctive glyph compounds in the Primary Standard Sequence—T617a:713.181 and T228.617a:126 (Fig. 7b): The latter compound also appears on a number of monuments as a kind of “count” glyph associated with both Initial Series dates and Distance Numbers. On Tikal, Stela 31, this glyph appears three times (A12, C20, and G15, Fig. 8b) At A12, the *nen* glyph marks the date 9.0.10.0.0 7 Ahau 3 Yax and at G15, the date 9.0.0.0.0 8 Ahau 13 Ceh. In the third example at C20, it follows a distance number recording the time elapsed from 8.17.0.0.0 until 8.17.1.4.12 11 Eb (14 Mac). On the Late Classic Stela J from Quirigua, the same *nen* compound appears at E1 (Fig. 8a) immediately before a Distance Number of 0.11.13.3,

which is followed by the more expected Posterior Date Indicator (T203:T59H:126).

T228.617a:126 occurs twice in a similar context at Palenque. In the first example, the glyph is found on the Tablet of the Sun following the Initial Series date, the lunar data, and the 819 Day Count passage, but it precedes the verb (birth) to which the preceding calendric data refer (Fig. 8e). On the Inscribed Pot from Group III (Fig. 8f), the same glyph again stands between the Initial Series date and its supplementary calendric data and the verb. This context is very similar to that found on Stela 31 of Tikal where the glyph stands between date and verb, but at Palenque the calendric information is much more complicated than at Tikal. The very complication of the initial date (Long Count date, Lord of the Night, Lunar Series, and 819 Day Count) suggests that the mirror glyph functions as a means of highlighting and focusing attention on the verbal compound which follows it. This function may very well relate to the use of *lem* in the Quichean languages as the word for “declare, narrate, and relate.” In Kekchi, *len* is a quotative particle used to mark hearsay information for which the speaker cannot take direct responsibility. In both the Quichean languages and Kekchi, *lem* (or *len*) are homophonous or nearly homophonous with the word for mirror.

Summary

In summary, the T617a grapheme has been identified as the element shown on the forehead and body of a variety of deities including God K, the Jester God, the Sungod, and a God C variant. The object has been identified visually as a mirror which is called *nen* in the Western and Central Mayan languages and *lem* in the Eastern ones.

Nen and *lem* have been shown to be associated through their common meaning of “shine” or “gleam” and by the wide distribution of *lem* as the term for “shine,” “gleam,” and “flash.” *Nen* is found in the Yucatecan expressions *u nen cab* and *u nen cah* which refer to rulers and priests as “mirror of the world (and of the people).” In Quiche, *nem* is a term for “to succeed in office” and *lem* is the term for “mirror” and “to declare, manifest, and narrate.” The last meaning appears in Kekchi as a quotative particle.

The mirror glyph appears in two consistent contexts which relate to the meanings given above. At Palenque, it is a part of the verbal glyph used to record the heir-designation events of Chan-Bahlum and Xoc, and at Palenque, Quirigua, and Yaxchilan, it is used in the same verbal glyph to record the accessions of Kan-Xul II, Two-legged-Sky, and Shield-Jaguar.

The same mirror compound (T617a:713.181) is used on the Dresden Venus pages as the principal event of the spearing scenes and as the event of the four phases of the Venus cycle. The primary meaning of the *nen* compound on the Venus pages is perhaps “shine,” but since Venus is invisible in two of its four phases, the glyph is more likely to mean “succeeds in office,” referring to the successive initiation of each of the four phases.

Lastly, T617a appears in two compounds (T617a:713a.181 and T228.617a:126) that appear as an introductory glyph to the Primary Sequence, and in the case of the latter glyph, as a kind of highlighting glyph to focus attention on a verb that follows Long Count dates. It has been suggested that in both of these contexts, the mirror glyph may function as a highlighting glyph, meaning something like “it is said . . .” or “it was manifested. . . .”

Figure 8. T617a as a “count” group



















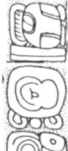





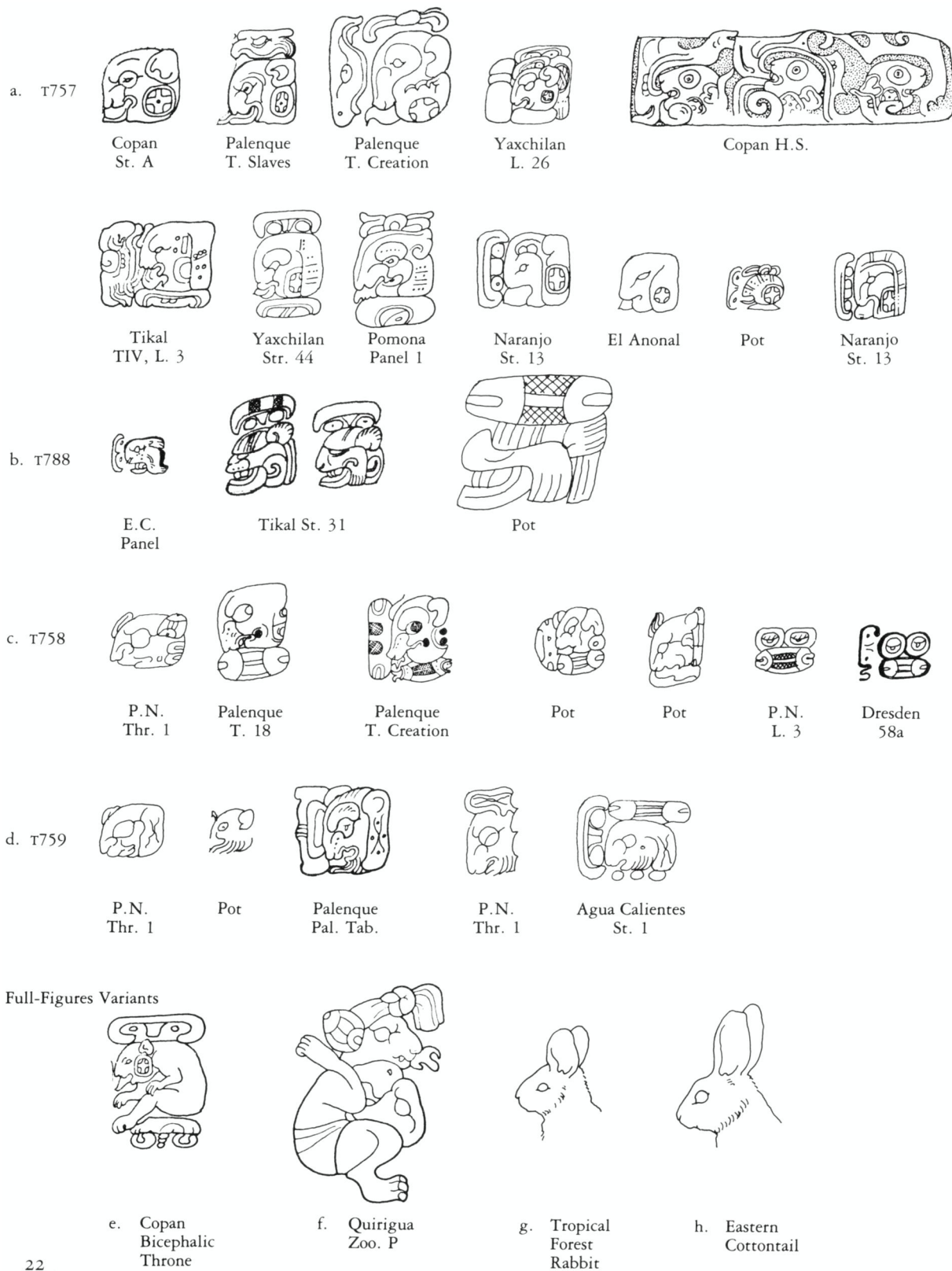
a.	Quirigua Stela J				
	T228.617a:126	3 days	11 tuns	0 katun	PD1 (9.14.13.4.17) 12 Caban 5 Kayab
		13 uinals			
b.	Tikal Stela 31 (A5-B13)				
	9. 0. 10. 0. 0 7 Ahau G9 F 3 Yax				Lunar data “mirror” ?? half period of 1 cycle
c.	Tikal Stela 31 (G10-G16)				
	ISIG 9. 0. 0. 0. 0 8 Ahau G9 F 13 Ceh				“mirror” were completed 9 cycles
d.	Tikal Stela 31 (D17-D19)				
			1.4.12	end of “mirror” tun	[until] 11 Eb
e.	Palenque Tablet of the Sun (A8-D6)				
	6 Cimi G3/F 19 Ceh	1.2.11	819 Day Count clause	“mirror”	he was born GIII
f.	Palenque Initial Series pot				
	7 Kan 1.11.10	verb	1 Ben 11 Zotz’ east	red	God K “mirror” he acceded Ah Nabe 6 Cimi . Pacal

Figure 9. The r757, r758, r759, and r788 graphemes



Part 2: T757 as *Umul*, “Rabbit”

PETER MATHEWS and I (1974) pointed out the existence of a compound at Palenque which serves as the functional equivalent of the T644/188 “seating” phrase previously shown by Berlin (1968) to be the functional equivalent of Proskouriakoff’s T684/188 Inaugural expression. Our phrase, the T713/757 compound, appears with the same nominal phrases and with the same dates as other recognized “accession” statements, including the T644 seating expression and the T700var ideograph for the act of sitting down. Berlin (1968: 144) proposed that the T684 Inaugural phrase and the T644 seating expression might represent the assumption of different offices, i.e. secular and religious. I propose on the other hand that two verbal phrases, T684 and T644, are alternative expressions for the act of accession and that the Affix Cluster (T59.168:188) which follows them expresses the office assumed in the act.

T713/757 “accession” expression appears prominently in texts at Palenque, but it is rare at other sites. It appears on Machaquila Stela 3 (Fig. 15p), on Chinikiha Stela 1 (Fig. 15d), on La Mar Stela 3 (Fig. 15s), and in reduced form on Tikal Stela 31 (Fig. 15r). A variant of it which includes the T617a mirror grapheme appears in almost identical phrases at Yaxchilan, Structure 44 in the accession phrase of Shield-Jaguar (Fig. 6b), and on Quirigua, Stela J in the accession phrase of Two-legged-Sky (Fig. 6a). A slight variant of the T617a/713/757 phrase again appears at Palenque as the accession statement of Kan-Xul II on the Palace Tablet (Fig. 6c). The nominal phrases of

Two-legged-Sky and Kan-Xul II appear in other texts with the same date, but different accession phrases (T644/188) so that there is fair certainty that all three events (T713/757, T617a/713/757, and T644/188) are functional equivalents. Furthermore, it appears that the T713a/757 phrase, like the T644/188 and T684/188 compounds, is structurally composed of a verbal compound (T713) and an Affix Cluster (T757) which can be grammatically identified as a preposition + noun(s) phrase.

Graphemic Origin

Proskouriakoff (1968) demonstrated that the long prominent teeth that characterize the Early and Late Classic versions of the T757 animal identify it as a rodent of some kind and that T788 is the Early Classic version of the Late Classic T757. The prominent characteristics of the T757 animal in both of its versions include large incisor teeth, a ruff of fur along the jaw of the Early Classic examples, a small ear and eye, and a lolling tongue which is a characteristic shared by both dogs and deer (Fig. 9a, b). A number of examples from Late Classic texts have a long ear at the rear of the head with a series of numbers inscribed on the ear.

Thompson (1962: 354) pointed out that in the name phrase of XVIII JOG (XVIII.1.757/1030) at Copan and Quirigua, the *u*-bracket (a third-person pronoun, Set A) appears *between* the numerical coefficient and the T757 grapheme (Fig. 12d).

No Maya numerical construction allows for the placement of the possessive pronoun between a number and a noun or ordinal suffix unless the noun is possessed. As a result, Thompson proposed that the *u*-bracket may represent the first phoneme of a word beginning with the value *u*, and observed that the *u*-bracket appears more frequently with T757 than with any other glyph.

Thompson's observations on the improbability of the function of T1 as a possessive pronoun in the T757 name are reinforced by its appearance in the T713/757 "accession" expression at Palenque where the T757 grapheme is always prefixed by T89, *tu*, the contraction of the locative preposition *ti* and the pronoun *u* (Thompson 1971: 57). In a number of cases, an additional pronoun (T1 or one of its equivalents) is prefixed to T757 (Fig. 15) in addition to T89; but since T89 already includes a pronoun, it is highly unlikely that a second one would be needed or grammatically possible.

Substitution Patterns

T757 appears in substitution patterns in a variety of different contexts which provide data on its function, graphic identification, and phonetic value. These substitution patterns are as follows:

Glyph B of the Lunar Series (Fig. 10, row 2)

The most frequent grapheme appearing in Glyph B is the T758 animal which has many of the same characteristics as the T757 animal, including the small ear and eye, and the front teeth of a rodent (Fig. 9c, f). I know of no cases where T758 appears with a T281 *kan*-cross infix, but in a number of pottery texts it appears with the long tongue characteristic of T757. Especially in Early Classic versions of T757 and T758, the animals are extremely close in appearance, and in full-figure examples at Quirigua and Copan, both animals appear with four toes on the front paws and three on the rear, configurations of the agouti family (Fig. 9b, c, e, f).

T758 and T287 (Fig. 10, a1–b1, a2–b2). T287

substitutes for T758, not only in Glyph B, but also in the 'rodent-bone' (T758:110) glyph when it appears in other contexts in the Dresden Codex and in monumental texts (Fig. 10, a1–b1). Because the substitution of T287 for T757 does not occur in any context other than Glyph B, it is probable that T287 is the substitute of T758 alone, and not T757.

T287 most closely resembles the sign for 'eyes' which appears in glyphic and iconic versions of animals (Fig. 11a). Since the grapheme appears in doubled form, it is possible that it represents a consonant-vowel-consonant (CVC) word in which both consonants are the same. A text on Dresden 66a (Fig. 11b) may provide some clues as to the phonetic value of T287. The text accompanies a picture of God B sitting in rain under a sky band from which are hung the signs of the eclipsed sun and moon. The first two glyphs of the text repeat the signs for the eclipse of the sun and moon in the grammatical position normally held by 'event' glyphs. The subject of the events follows in position 3 and 4 and is identified as God B, who is shown in the scene. The last two glyphs are T533:116.504:116 (*kin akbal*) and 287:526.561c (. . . *cab-caan*). *Kin-akbal* appears to be a couplet contrasting "lightness" and "darkness" in reference to the eclipse events and the *cab-caan* phrase appears to give the location as 'earth' and 'sky'. T287 is positioned between the 'sun-darkness' and the 'earth-sky' couplets where a locative preposition meaning 'in' and 'on' include *ich* and *yol*, but *ich* is also the Yucatecan word for 'eye', which T287 appears to represent. The Dresden passage provides evidence for a tentative reading of T287 as *ich*, which if doubled, would yield a word such as *ichich* or (*i*) *chich*. It is then possible that T287 is a phonetic substitute for the logograph of the animal represented by T758 and that the animal was named by a word such as *ich*, *ichich*, or *chich*.

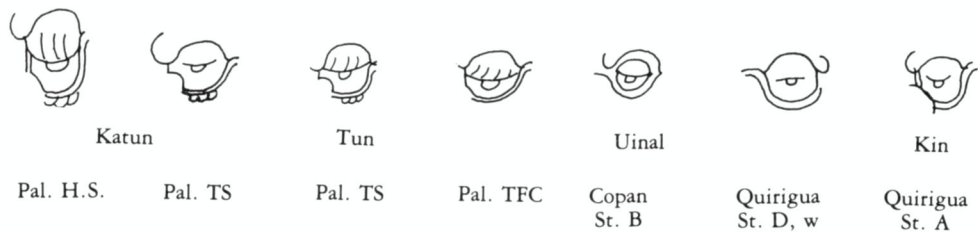
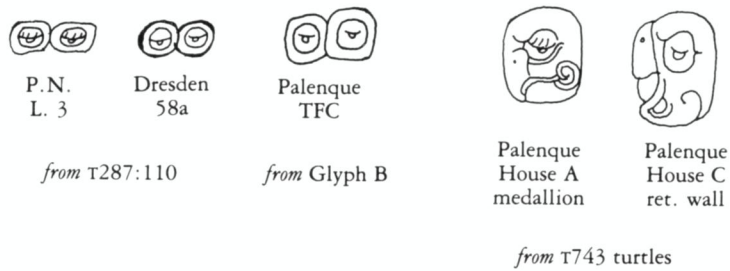
T758 and T757 (Fig. 10, b2–c2). The T757 animal substitutes for the T758 animal in Glyph B of the Lunar Series, and in the cases where T757

Figure 10. Comparative analysis of substitution patterns

	a. T287	b. T758	c. T757	d. Muluc	e. Vase	f. T205/741b
1. Rodent-Bone						
2. Glyph B						
3. <i>Muluc</i> Day Glyphs						
4. "Count" Groups						
5. Vase Compound						

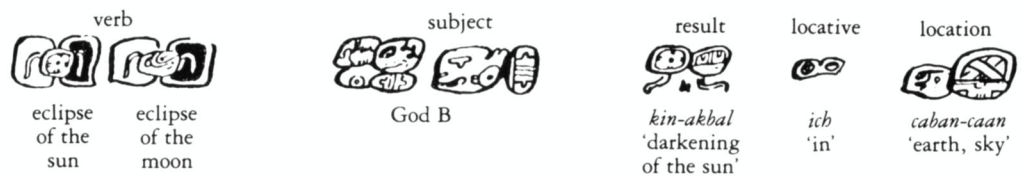
Figure 11

a. The graphic origin of T287



Eye motifs from head variants of period glyphs

b. T287 as a possible locative



appears, the T110 bone associated with T758 remains. On Quirigua Stela E, T758 appears in Glyph B on the one side and T757 on the other, and on Zoomorph P, T513 *muluc* is prefixed to T757.

T758, T757 and T513 (Fig. 10, b2, c2, d2). In a number of cases, T513 *muluc* also appears in Glyph B, but it never appears with the T110 'bone' affix.

The Muluc Day Sign (Fig. 10, row 3)

T757 appears as the glyph for the day Muluc on Sacul, Stela 1 (9.17.16.9.9 \pm 1 CR), the Hieroglyphic Stairway at Copan, and on an Early Classic panel of unknown provenience which carries the Bonampak Emblem Glyph (9.4.6.14.9). In all three of these cases, T757 appears without the *u*-bracket (T1) as a prefix.

On El Zapote, Stela 1 (8.19.10.[10].9??), in the Early Classic frescos at Uaxactun, and on Seibal, Stela 13 (post-10.0.0.0.0) a round-bottomed, narrow-necked jar appears as the day sign Muluc (Fig. 10, e3). In the Uaxactun and El Zapote examples the vase is inverted, while in the Seibal example it is upright. The substitution of the jar for *muluc* is reinforced by a number of examples from pottery painting where ceramic vessels are marked with *muluc* infixes.

The disappearance of the *u*-bracket when T757 appears as the day sign Muluc suggests that only the second syllable of the T1.757 word is needed in the *muluc* context. This substitution pattern is in contrast to that of Glyph B where T757 can appear with a *u*-bracket or with a *muluc* affix. In some manner, T513 *muluc*, the T757 animal (without the *u*-bracket), and the inverted jar must be substitutable for each other.

"Count" Groups (Fig. 10, row 4)

The T513 *muluc* grapheme is one of the major components of the Anterior and Posterior Date Indicators (T513:59.126 and T679.513:59). It appears in both glyphs and is interchangeable with the *xoc* fish (Fig. 10, d4, f4), which may appear in

variations listed by Thompson (1962) under T741b, T1083b, and T205. At Tikal on Stelae 9 and 10, and on Stela 26 at Uaxactun, the inverted jar noted as a substitute for the day sign Muluc occurs in both Anterior and Posterior Date Indicators (Fig. 10, e4). The substitution of the inverted jar for *muluc* occurs in the contexts of both the day sign and 'count' glyphs.

Muluc and the Inverted Jar (Fig. 10, row 5)

The inverted jar previously discussed as a substitute for T513 *muluc* also appears as a component in a supernatural title found in 819 Day Count clauses and in the Skygod title phrases in Yaxchilan royal names (Fig. 10, d5, e5). Within this glyph the jar appears in inverted position and a deer horn is attached to the bottom of the vase (top of the glyph). Since this deer-horn-jar glyph appears exclusively in association with supernaturals and with the names of more than one such entity (God K and the Skygod), it appears to represent some titular quality of supernaturals. In the 819 Day Count clause on the Inscribed Pot from Palenque, the inverted jar is replaced by the T511 variant of *muluc*, which appears in this case with the phonetic complement *mo*² surrounding it.

T501 Imix and T757 (Fig. 12)

Kelley (1962a) pointed out the substitution of the T757 grapheme for T501 in the T501.25:501 compound which he reads as *bacab* (Fig. 12a). Proskouriakoff (1968: 250–251) rejected the reading *bacab*, but entertained for T757 the value *ba*, which is the root in various languages for gopher (*tuza*). She pointed out the apparent confusion, either in Spanish or Maya or both, for terms relating to small burrowing animals, and suggested that *ba* may have been a general term for all such animals.

Kelley (1976: 173, 182–183, and personal communication, 1974) makes sharp graphemic distinctions between 'imix' variants: T501 for *ba*; 502 for *ma*; and T501 with darkened center as *naab*.

Generally, Kelley's distinctions are valid but there is evidence that the Maya were not as careful graphically as struggling epigraphers would wish in contexts where the value of the grapheme was clear. The compound for the month *Mac* is just such a case. *Mac* is one of the most clearly phonetic glyphs known in Maya writing. In most occurrences it begins with T74, Landa's *ma*, and includes either T205, *ca* (fish) or T25, Landa's *ca*, to form the phonetic compound *ma-c(a)*. A number of examples include a turtle carapace, *mac* (carapace) appearing with T74 *ma* and/or T25 *ca* as phonetic complements. However, in five of Thompson's examples (1971: Fig. 18), T501 (Kelley's *ba*) appears in the *Mac* month glyph (Fig. 12c). In all but one of these cases, T74 *ma* is prefixed to T501, perhaps as a phonetic complement insuring the reading *ma* for T501.

The value *ma* for T501 is supported by another substitution accompanying the "scattering" event. There are three important examples in which phonetic complements are adjoined to or infixed into this glyph (Fig. 12a). In the first example, T502 (Kelley's *ma*) is infixed into the hand, and T178 (*la*) is suffixed forming the phonetic complement *mal*, the reading suggested by Kelley (1976: 51–52). In the second example, also from Palenque Temple XVIII, the "scattering" hand is followed by T74, Landa's *ma* and the personified form of T178 *la*, again forming the phonetic complement *mal*. The final example is found on Yaxchilan Structure 33, Step VII, which records both ancient mythological and historical events and shows a ballgame scene. The historical events are recorded in a verbal series including a glyph for the ballgame and a newly recognized blood-letting expression. The second verb in this series is "scattering" followed by T501 and a badly eroded sign that was surely T178. Peter Mathews (personal communication, 1981) has carefully examined detailed photographs of this glyph, and confirms that it is T501 and not T502. Therefore, in phonetic complements accompanying "scattering," the

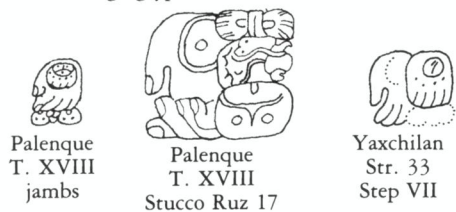
three signs T502 (accepted as *ma*), T74 (Landa's *ma*), and T501 *ma* are found in free substitution.

However, I do accept Kelley's *bacab* reading for T501.25:501 and suggest that the title was based on the root *uac* (under which *bacab* is entered in the Motul) which means "to stand upright," a position normally found on Classic portrait stelae. Furthermore, T501 appears as *ba* in Berlin's *batab* (1958: 114) title at Yaxchilan. The fact that T502 (*ma*) and T501 (in other contexts *ba*) both occur in the *Mac* compound indicates that either T501 was polyvalent with the values *ma* and *ba*, or the graphic distinction between T501 and T502 was not always maintained.

The name compound XVIII.1.757/1030 (18 JOG) appears prominently as the name compound of a ruler at Copan who also appears in the inscriptions of Quirigua (Fig. 12d). While the 18 JOG name at Quirigua and Copan are of the same person, different persons with this same name are recorded on the Hieroglyphic Stairway at Naranjo and on several of the bones from Burial 116 and Lintel 1 of Temple I at Tikal. The 18 JOG name that appears on the Hieroglyphic Stairway at 9.10.3.2.12 seems to reoccur on Stela 32 at Naranjo at the date 9.19.4.1.1 with an Inaugural event. The two name phrases cannot refer, of course, to the same person, but the recall of ancestral names is documented at Palenque, Tikal, Yaxchilan, and many other Late Classic sites. The name compound on Stela 32 is transcribed as XVIII.1.501:314/1030 (Fig. 12c). A structural analysis of the 18 JOG name at Quirigua and Copan (Fig. 12d) shows that T1030 (God K) is an integral part of the name and may be conflated with T757 into one glyph block. Although the name may occasionally appear without the God K glyph, the consistent appearance of God K with the Stela 32 'imix' variant of the name surely confirms TXVIII.1:501:314 as a variant of TXVIII.1:757. Since T501 is phonetically *ba* or *ma*, the name should read either *Uaxaclahun Uba* . . . or *Uaxaclahun Uma* . . . or some approximation which matches a rodentlike animal.

Figure 12. T501 and the 18 JOG name

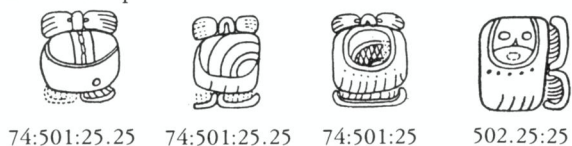
a. T501 in the “scattering” glyph



b. T501 in the *Bacab* compound



c. T501 in the *Mac* compound



d. T501 in the 18 JOG name

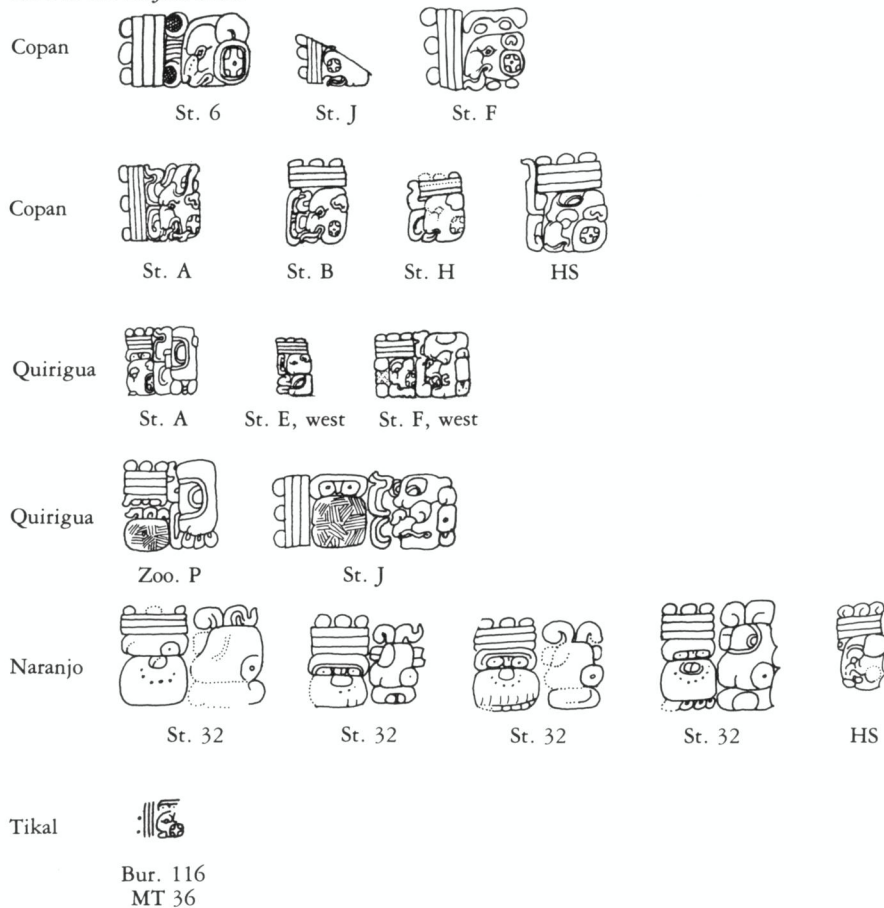


Figure 13. The function of T1.757 and its substitutes as a general and auxiliary verb

a. T1.757 as a general verb



Yaxchilan Lintel 17



Tikal MT 51b

b. Various verbal expressions for blood-letting



"fish-in-hand/God K" from Yaxchilan Lintel 25



"auxiliary verb + *ti* + obsidian lancet" from Yaxchilan Lintel 24



"fish-in-hand + *tu* + obsidian lancet + *ti* + akbal" from Tikal Temple I, Lintel 3

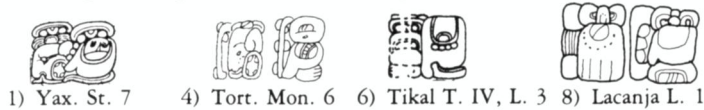


"auxiliary verb + *tu* + obsidian lancet + *ti* + akbal" from Yaxchilan Stela 18



"auxiliary verb + obsidian lancet + akbal" from Palenque, the Orator

c. "Blood-letting" verbal phrase used as "child of parent"



1) Yax. St. 7

4) Tort. Mon. 6

6) Tikal T. IV, L. 3

8) Lacanja L. 1



2) Pal. TC



5) Yax. St. 11



7) Tikal T. I, L. 3



9) Naranjo St. 8



3) Yax. L. 10



10) Tikal T. IV, L. 3

Auxiliary Verbs and Parentage Statements

The substitution patterns which were discussed in the previous section can be extended into other syntactical and grammatical areas. However, since these substitutions involve additional syntactical and semantic information, they will be discussed separately in the following section.

General and Auxiliary Verb Constructions

(Figs. 13, 14)

Proskouriakoff in her analysis of T757 came to the following conclusions about its functions:

With rare and dubious exceptions, this hieroglyph (T757 and 788) is found at the beginning of a column of glyphs immediately after a date or following one of those glyphs that, like the Emblem Glyph, normally close a statement. . . . An action glyph, or glyphs designating a male or female personage can follow, indicating that this opening glyph is not part of some longer expression, but is either an independent ritual phrase introducing what follows, or a complete predicate. . . . The precise meaning of the opening glyph is unknown, but because it is used in a wide range of contexts, almost always occurs at the beginning of a passage, and often in direct association with individual figures, it must stand for some widely applicable expression, such as, for example: "Here is portrayed (or recorded) . . . , " "In commemoration of . . . , " or some such phrase directing the attention to the subject of the accompanying picture (Proskouriakoff 1968: 249).

With great insight, Proskouriakoff identified an important syntactical structure, which has been recognized only recently in modern Maya languages, especially in Chol (Josserand, Schele, and Hopkins n.d.), and matched it to the function of T757 as the initial non-calendric glyph of a clause. Proskouriakoff observed that T757 appears as the single event glyph in many different contexts and that a second event verb may follow T757 in the verbal phrase. In the first case, T757 functions as some general action or introductory phrase (such as those proposed by Proskouriakoff) which is applicable to scenes of many different rites; this kind of event glyph may be characterized as a "general verb" (Figs. 13a, 14b). However, the

syntax of the second case is entirely different. The preferred syntactical order for intransitive (or intransitized) constructions is verb-subject in the hieroglyphic writing system. In a large number of cases, the verbal expression consists of an affixed verb (intransitive or intransitized) followed by a prepositional phrase; a good example of this kind of construction can be found in the T644 and T684 'accession' expressions (Figs. 24, 25). T757 appears in this kind of construction on the front of Stela 24 of Naranjo (Fig. 14a). However, in contrast to this verb + prepositional phrase construction, T757 appears in a large number of verbal phrases, especially at Yaxchilan (Fig. 14), where it is followed by the locative preposition *ti* (T59) and a glyph which in other contexts (sometimes on the same monument [Fig. 14h]) appears as an affixed verb. The special construction can be described as:

general verb + *ti* + action (verbal noun)

This kind of verbal construction is characteristic of modern Chol, but can be found in Yucatec, Mopan, Kekchi, Chontal, and other languages. In Chol, it is one of the preferred means of dealing with the tense aspect of intransitive constructions. All inflectional affixing (which may be either transitive or intransitive) is attached to the general or auxiliary verb leaving the second part of the construction to appear in the form of a verbal noun without inflectional affixing. This construction highlights the verbal noun, which is the part distinguishing the particular action from all others. Examples of the kinds of constructions discussed above are as follows:

Verb + prepositional phrase.

yaš ʔaṇ ti mal yotot	"he is already <i>inside his house</i> ."
ʔaṇiš ti čan	"it is now <i>up above</i> (in sky)."























Intransitive verbal inflection.

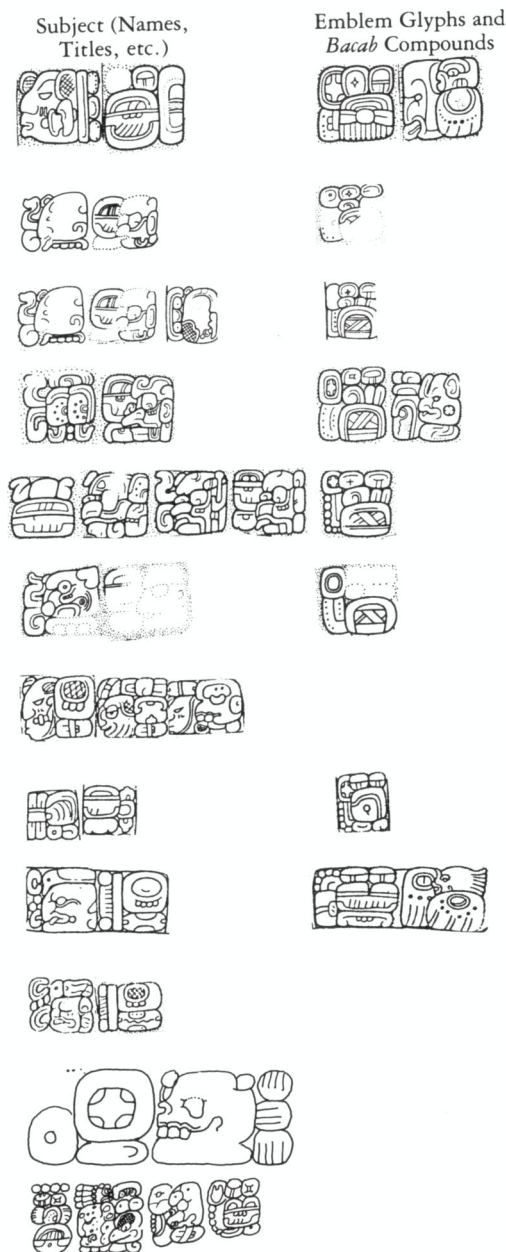
wiṣiyon	"I slept."
čaš mahliyoñ	"I went."

Transitive verbal inflection.

woli k-tah	"I am finding it."
woli k-ač'	"I am chewing it."

Figure 14. Introductory phrases with $\tau 757$

		Date	$\tau 757$	Verbal Compounds ($\tau 59$, <i>ti</i> is emphasized)
a.	Naranjo St. 24 A1–A9	(9.13.7.3.8) 9 Lamar 1 Zotz'		
b.	Naranjo St. 22 A1–A6	(9.13.10.0.0) 7 Ahau 3 Cumku		
c.	Naranjo St. 21 A1–A12	(9.13.14.4.2) 8 Ik 0 Zip		
d.	Naranjo St. 20 A1–B3	7 Cib 14 ??		
e.	Naranjo St. 13 A1–A2, A5–A12	(9.17.10.0.0) 12 Ahau 8 Pax		
f.	Naranjo St. 2 A1–A4	ca. 9.14.0.0.0 6 Ahau 13 Muan ??		
g.	Yaxchilan L. 1 E1–G3	(9.16.1.0.0) 11 Ahau 8 Tzec)		
h.	Yaxchilan L. 2 F1–Q1	(9.16.6.0.0) 4 Ahau 3 Zotz')		
i.	Yaxchilan L. 3 A1–E2	(9.16.9.0.0) 8 Ahau 8 Zotz')		
j.	Yaxchilan L. 42 A1–C3	(9.16.1.2.0) 12 Ahau 8 Yaxkin		
k.	Yaxchilan L. 24 A1–F3	(9.13.17.15.12) 5 Eb 15 Mac		



Auxiliary verb + *ti* + verbal noun.

ča mahl-iy-on ti t'an "I went to speak."

mi k-mahl-el ti pašial "I'm going to go for a walk."

ʔuht-iy-on ti t'an "I finished talking."

mi k-uht-el ti t'an "I'm going to finish talking."

mi h-kah ti we'el "I'm going to begin to eat."

kahiy-on ti we'el "I'm beginning to eat."

Two auxiliary verbs of the type described above (T1.757 and T516a:103) have been identified thus far in the writing system. Any reading of T1.757 must allow for its function as a general verb and also as an auxiliary verb in these kinds of syntactical constructions.

In two contexts, T1.757 is replaced by another glyph which appears to be phonetic in construction. As the general verb previously discussed, T1.757 appears as the event glyph on Yaxchilan Lintel 17, a blood-letting monument. The main text records a blood-letting with Bird-Jaguar as the subject, but the scene shows two people—Bird-Jaguar and a woman who is named in a text along the lower border of the scene. Her name phrase is introduced by T1.757, which, because it appears with so many different kinds of activities, must represent some very generalized kind of action (Fig. 13a). Among the bone texts found in Burial 116 at Tikal are a number of inscriptions which are introduced by T1.501:102 and thereafter include only the name phrase of the subject of this verb (Fig. 13a). Because of the number of texts that are introduced by this event glyph, it is possible that it, like T1.757, represents some very general kind of verbal glyph, and therefore it may be a semantic or phonetic substitution for T1.757.

The interchangeability of T1.757 and T1.501:102 can be confirmed by a comparison of various texts concerning blood-letting from Tikal, Yaxchilan, and Palenque. The verbal phrase most often accompanying blood-letting scenes (or the resultant vision scenes) is "fish-in-hand/God" (T714/1030). On Lintel 13 at Yaxchilan, the "fish-in-hand" glyph appears as the verbal noun in an auxiliary verb (T1.?:757) + *ti* + verbal noun construction;

on Lintel 14 it appears with the verbal affix (T181); and on Lintel 25 (Fig. 13b) it occurs with T1 as a prefix (perhaps as transitive inflection for the third person). On Yaxchilan Lintel 24, an alternative verbal phrase for blood-letting is found which can now be identified as an auxiliary verb construction consisting of T1.60:757:314 + *ti* + plus a glyph (T712) which appears to be an obsidian blood-letter (Fig. 13b).

On Lintel 3 of Temple I at Tikal can be found a very similar phrase which records an event celebrating the 13 katun anniversary of the last date on the Early Classic monument, Stela 31 (9.0.3.9.18 and 9.13.3.9.18). Ruler A not only recorded this anniversary celebration, but a great deal of his energy and resources were spent on honoring this early ruler (Coggins n.d.). The verbal phrase which records the rite celebrated on the anniversary day includes the “fish-in-hand” glyph followed by the locative and pronoun contraction *tu* (T89) and the obsidian blood-letter. Two of the glyphs prominent in blood-letting event phrases at Yaxchilan, therefore, appear in the Tikal phrase, and, since the event is a 13 katun ancestral celebration, blood-letting seems a particularly appropriate rite for the day. This blood-letting closes with a second *ti* + noun construction with *akbal* as its main sign (Fig. 13b).

An almost identical verbal phrase appears on Yaxchilan Stela 18 (Fig. 13b) and seems to record a blood-letting event conducted by Shield-Jaguar on the same day (9.14.17.15.12 3 Eb 14 Mol) that he captured *Chuen*. The text opens with the Calendar Round date followed by the capture event and the name of *Chuen*, but the name of the subject of the capture is deleted and follows the next verbal phrase—blood-letting. Since Bonampak clearly shows that ritual torture was conducted as a part of warfare, the appearance of a blood-letting event on the day of a capture is appropriate. Note that Shield-Jaguar is named by title, rather than by personal name in this text. The event phrase is also slightly different from the Tikal blood-letting event discussed above; the obsidian

blood-letter and the *akbal* glyphs are nearly identical, but, instead of the “fish-in-hand,” the Yaxchilan text has the T1.501:102 substitution (from the Tikal bones) for the T1.757 auxiliary verb.

A very similar event phrase occurs at Palenque on the Orator, which was paired with the Scribe as *alfardas* for the south stairs of the Tower. On both tablets, rulers (Chaacal on the Orator and Chac-Zutz' on the Scribe) are shown kneeling in minimal clothing with cloth bands as replacements for the ropes of captives. On the Scribe, the figure holds a pencil-shaped object, which I think is a blood-letter, while the figure on the Orator holds his hand to his mouth from which emerge speech lines leading to the nearby text. Although it has been recently argued by Baudez and Mathews (1979) that these two figures are captives, I think that their identification as persons undergoing a blood-letting rite is equally valid. The dotted scrolls which emerge from the ear (a frequent location for blood-letting) of the Scribe are also found around the mouth of the woman on Lintel 24, who has a thorn-lined rope through her tongue; surely these dotted scrolls represent blood. On the Scribe, the obsidian blood-letter and *akbal* follow the verb as in the Yaxchilan and Tikal texts, but the verb is T1:501:314/T511H (Fig. 13b). The head variant of the T511 *muluc* may differentiate the verb, but as has been shown previously, *muluc* (T513 or T511) and T757 are interchangeable, and it may act as a phonetic complement in this case.

In three cases, T1.501:102 has been shown to substitute for T1.757 both as a general and as an auxiliary verb. Since T501 has proposed values of *ma* or *ba*, and since T102 has a proposed value of *al* (Fought 1965), a “reading” of *umal* or *ubal* may be tested for T1.757 as a general and auxiliary verb.

Parentage Statements (Fig. 13c)

Christopher Jones (1977: 41–42) in his analysis of the Late Classic record from Tikal identified a number of glyphs which record the relationship

between offspring and parents. In pursuing the suggestions of Jones, it has been found (Schele, Mathews, and Lounsbury n.d.) that one of these glyphs marks the relationship between child and father (T3.122:535); others between child and mother (T1.1.606:23 and T126.534[or others]:670); and still another between child and either parent (T3:580:59.712:nn) (Fig. 13c 6–7). This last glyph has now been recognized at many different sites and in different forms, the chief of which has T1.757 as a substitute for the *muluc* variant (T3.580) used at Tikal.

Recognition of the substitution of T1.757 for T3:580 allows for the identification of this “child of parent” expression as a metaphorical reference to the child as the “blood” of the parent in exactly the same form as the blood-letting event discussed previously; it is the auxiliary verb + *ti* + obsidian blood-letter expression that appears at Yaxchilan, Tikal, and Palenque. The identification of this expression as a blood-letting metaphor can be confirmed by one occurrence of it on Stela 8 at Naranjo where the obsidian blood-letter is replaced by the three-knotted headdress of the personified blood-letter (Joralemon 1974).

The “child of parent/blood” expression appears with many different variations, especially of the auxiliary verb glyph. It can appear simply as T1.60:757 (Fig. 13c 1–3) or with the T580 *muluc* variant in addition to T1.757 (Fig. 13c4, 5). On Lacanja, Lintel 1 (Fig. 13c8), the T501 substitute appears instead of T1.757. In the “child of parent” expression, T1.60:757 can be replaced by T1.60:501 as in the context of auxiliary verbs, but it can also be replaced by or carry as a phonetic complement, T3:580 (Fig. 13c4, 5). In this case, T580 is a *muluc* rotated into an upright position. The different orientation may or may not effect the phonetic value of T580, but its value must correspond to T1.501:102 (*umal* or *ubal*) and T13.60:501 (*u.??:ma . . .*).

T1.757 also appears with the “child of woman” expressions, especially T1.1:606, although it never occurs with the T3.535 “child of father” glyph. In

every case, T1.757 precedes the “child of mother” glyph although its appearance in parentage statements not using the “child of blood” expression seems to have been optional. One occurrence of T757 is extremely informative about its grammatical function because on Temple IV, Lintel 3 it appears between Ruler B and his mother without T1 as a prefix (Fig. 13c10). Instead, it appears with T181, a verbal suffix which normally cannot appear with T1 (or its equivalents) as a prefix. T181 marks T757 as a verb in this context which includes the following components:

1	2	3	4	5
verb	ruler	verb	child of	mother
		(T757.181)		(Lady Macaw)

The subject of the first verb is Ruler B; the subject of the second verb is “the child of mother Lady 12 Macaw.” This construction suggests that T757 must represent some verbal concept which can function, not only as a general and auxiliary verb, but as some act or state appropriate for a child in relationship to his mother. In addition, the grammatical implications of the form of the T757 verb in this Tikal text are important; when T181 appears with T757, the pronominal prefix is lost. Since T1 (and its equivalents) can be used to indicate the possession of nouns and since its phonetic value is known from Landa to be *u*, it is clear that T1 *u* is the third person pronoun from Set A². The fact that this pronoun disappears when T181 occurs as a suffix suggests that T1 in verbal (and not necessarily noun) contexts functions as an inflectional pronoun for the verb. If this observation is correct, the verbal root used as a general and auxiliary verb in the previous examples is *mal* or *bal*.

²Maya languages have two sets of pronouns. Set A (the ergative set) which function as the possessors of nouns and the subjects of transitive verbs, and Set B (the absolutive set) which function as the objects of transitive verbs and the subjects of intransitive verbs.

The T713/757 'Accession' Expression (Fig. 15)

The T713/757 'accession' expression consists of a verbal glyph (T713 plus variable) and a prepositional phrase (T89.1:60:757). The identification of the second glyph as a prepositional phrase is based on Thompson's (1971: 57) recognition of T89 as a contraction of the locative preposition *ti* and the pronoun *u*. The appearance of a locative such as *ti* between the verb and the noun of office is remarkably consistent in accession expressions recorded in early ethnohistorical sources as can be seen in the following examples:

culcinah ti alcaldeil, ti batabil, etc: poner a uno por alcalde, cacique, etc. (Yucatec, Motul)
ocol ti alcaldeil, ti batabil, etc. ser hecho alcade, cacique, etc. (Yucatec, Motul)
ʔoch ta ʔojou become king (Tzotzil, Laughlin n.d.)
chumvanix ta ahaulel macvaabin Macvaabin was seated in the rulership (Chontal of Acalan-Tixchel, Smailus 1972:23).

Since T1.757 appears following a locative preposition in an accession expression, its function must be in some way related to the kind of constructions illustrated above.

The first glyph of the T713/757 expression can be identified as its verbal component because all verbal suffixes and temporal affixes are attached to it and not the T757 component (Fig. 15, columns 2 and 5). The verbal glyph consists of two components (plus verbal and temporal affixing); T713, the rear view of a hand with extended fingers and a variable, which appears to record the specific title to which the person is acceding. Taack (1976: 47) has proposed a reading of *pach* T713 based on its identification as the "back of a hand" and on its function as a period-end glyph. I agree with his proposed reading and suggest that the word in the Cholan and Tzeltalan languages would have been *pat*, a word used for the "end" of something and for "to form thing of clay," and by extension "to make." As the main

sign in Glyph C of the Lunar Series and as a period-ending glyph for various parts of the katun, T713 appears to have meant "the end" of the particular cycle as marked by the glyph appearing over (or in) the hand. In accession phrases, it appears to have been read as the verb "to make." Paraphrased, T713 would read "(he) was made . . ." with the glyph for the title assumed placed over (or into) the hand. These title glyphs found in the T713 hand are as follows:

Zac-uinic

The most common title found in this expression consists of a dotted uinal glyph (T522) prefixed by T58, the glyph for the color "white" and by extension "resplendent" and "pure" (Fig. 15e-i). The dotted uinal glyph appears from Early Classic times as an important title at Tikal and later as a part of the *Chaacal* name at Palenque (Fig. 16a). *Uinal*, the Yucatecan term for 'month', appears to derive from *uinic*, the term for 'man' which is still used in several Maya languages as the term for the number twenty (there are twenty days in a *uinal*). I believe that the row of dots in T522 were used to mark this glyph as *uinic* in contrast to the unmarked T521 read as *uinal*. T58.522 was read, I propose, as *zac uinic* or "pure (resplendent) man." This title may be the Classic prototype of the Yucatecan title *halach uinic*, documented in ethno-historical sources.

T1030-0

T1030-0, the second title which can appear in the T713/757 'accession' expression, appears once with a *zac* prefix (Fig. 15c) and once as an infix in the T684 bundle glyph (Fig. 15a). T1030-0 also appears on the east panel of the Temple of Inscriptions as the title in prepositional phrases following the T644 'seating' event, and from its occurrences on the Palace Tablet, it can be shown to represent some concept such as "ruler." In both cases, after the deaths of Pacal and Chan-Bahlum are recorded, T1030-0 stands between Distance Numbers counted since the deaths and

until subsequent accessions. Each passage may be paraphrased as follows (Fig. 16b): “(it was) 6.12 since he died, T1030-0, until 8 Oc 3 Kayab . . .” and “(it was) 5.3 since he died, T1030-0, until 5 Lamat 6 Xul.” In each case the Distance Number leads from the death of the prior ruler to the accession of the subsequent ruler, and T1030-0 must be, therefore, some titular reference to the prior ruler.

I think that T1030-0 as a title may be identified as the glyphic version of the Jester God, a god of lineages and of rulers. The distinctive characteristics of the glyph T1030-0 are a long-muzzled zoomorphic head with a mirror on the forehead, its topknot often dropped in front of the mirror; the rear of the head is marked by a scroll and earlike motif which carries reflection lines. The pictorial Jester God has a tall hatlike shape (from which its nickname is derived) terminating in a bone shape. If this device were bent over the forehead in order to fit the pictorial motif into the square format of a glyph, it would closely resemble the glyph versions of T1030-0 found on the Palace Tablet (Fig. 16c). However, the association of T1030-0 with the Jester God is most clearly seen in the head-dresses of the figures on the sarcophagus sides at Palenque where the Jester God or conflated variants appear on all ten figures (Fig. 16d). In every case, the Jester God and variants are marked by the scroll-flap motif which characterized T1030-0. Furthermore, the Jester God can appear as a semantic determinative for *ahau* both as a day sign and as a title (Fig. 16e) so that in some way it must be the equivalent of *ahau* and a direct title for “rulers” and “lords.” It appears in the T713 accession verb as the equivalent of *ahau* and as the title assumed on accession. With T58 *zac*, the title is qualified as “pure”; and, when it is infixed into the T684 bundle (Fig. 15a), the title appears to be qualified as a “lord (or *ahau*) of the bundle, a device known from many ethnohistorical sources to contain objects of ancestral and dynastic power (see a full discussion of bundles in the following section).






























































T60

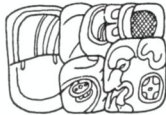























































The third title which may appear in the T713a hand is the T60 knot, which I believe to be the allograph of the T684 “bundle” grapheme of the Inaugural phrase (Fig. 15j-r). T60:713 is one of the title variants to occur outside of Palenque at Machaquila on Stela 3 with the date 9.19.4.15.1 (Fig. 15p) and at Tikal on Stela 31 with the date 8.19.10.0.0 (Fig. 15r). The Tikal example does not have the T757 prepositional phrase included in the expression, but since the title assumed in the accession rite is included in the T713 hand, and since the identical phrase occurs on the Palace Tablet at Palenque as the accession event for Xoc (Fig. 15q), the T60:713 glyph alone surely records the same event. The T757 prepositional phrase must have been optional, perhaps recording the context (a dynastic one?) in which the accession event took place. Since T60 is the diagnostic characteristic of the T684 bundle, the T60 title seems to imply the “taking possession of” (one of the meanings of *pat*) the dynastic bundle.

The Mirror

The fourth title in the T713/757 phrase is the T617a grapheme identified by Jeffrey Miller as a mirror (*nen*) and discussed as a title for rulers in the first section of this paper. The mirror is the same motif as that found on the foreheads of God K and the Jester God, both deities especially important to Classic Maya rulership. The mirror is often found conflated with the T60 knot and in one case, it was clearly manipulated to reflect the contrast between the Jester God as the bright mirror and God K as the obsidian (dark) mirror. On the Tablet of the Slaves, the accessions of Chaacal and Chac-Zutz’ are carefully associated and contrasted by temporal spacing and by the configurations of their accession phrase. In the first of the two records, Chaacal’s accession is recorded with T60 in the T713/757 expression, but T617, the mirror, is infixed into the center of the knot (Fig. 15j). This same conflation of knot in ‘mirror’ can be seen in Xoc’s accession phrase

Figure 15. Structural analysis of the T713a/757 'accession' phrase

	Full Phrase	Temporal Indicator	T713	T1030o	Verbal Affixes	T89 <i>Tu</i>	T60	T1 or equiv.	T757
a. Palenque IS pot, Grp. III									
b. Palenque HS									
c. Palenque TI 3									
d. Chinikiha St. 1									
	Full Phrase	Temporal Indicator	T713a	T59:522	Verbal Affixes	T89 <i>Tu</i>	T60	T1 or equiv.	T757
e. Palenque Pal. Tab., p18-019									
f. Palenque TC, F7-E8									
g. Palenque TC, Q7-P8									
h. Palenque TS, L2-M2									
i. Palenque TC, L1-L2									

	Full Phrase	Temporal Indicator	τ713a	τ60 τ60(617a)	Verbal Affixes	τ89 <i>Tu</i>	τ60	τ1 or equiv.	τ757
j. Palenque T. Slaves									
k. Palenque T. Slaves									
l. Palenque TI 3, E4-F4									
m. Palenque TFC, O2-N3									
n. Palenque Pal. Tab. R5-Q6									
p. Machaquila St. 3									
q. Palenque Pal. Tab., Q14									
r. Tikal St. 31, H8									
s. La Mar St. 3									

at Palenque (Fig. 15q) and in Stormy-Sky's at Tikal (Fig. 15r). In the second occurrence of the T713/757 expression on the Tablet of the Slaves (Fig. 15k), the mirror and knot are again conflated, but in this case T122, the smoke (or flame) motif which marks the mirror of God K emerges from the mirror. Chaacal's accession then reflects the bright mirror of the Jester God while Chac-Zutz's reflects the dark, obsidian mirror of God K.

Since the title assumed in the T713/757 'accession' expression is recorded by the glyph(s) above T713, the prepositional phrase which follows it must perform some function other than recording the office. This function, I suggest, is like that of T188 in the "inaugural" and "seating" expressions for accession. In both expressions, the phrase consists of a verb and a prepositional phrase including a locative, a title, and a T188, a glyph which is accepted by many epigraphers as the Classic version of T612 and Landa's *le*. As will be discussed in the final section of this paper, *le* is a term for "leaf," "generation," and it is the term for both political and genealogical succession in the Quiche *Popol Vuh*. Although a term for "succession" is not present in every example of the seating and inaugural expressions, it is there often enough that one can expect such a concept in the T713/757 expression, and the most likely glyph to record this concept is the T757 prepositional phrase.

T60 with T757

Thompson (1962: 354) called attention to the frequent association of T1 with T757; with almost the same frequency, however, T60, the knot of the T757 bundle, appears as a superfix to T757. Note that T60 does not appear with T757 in the context of Glyph B, in its substitution for the day sign *muluc*, or in the 18 JOG name previously discussed, and, therefore, the association of T60 seems to be limited to the contexts of T757 as a verbal glyph and in the T713/757 accession

phrase. If T60 is the allograph of the T684 bundle, any reading of T757 must incorporate one of the following proposed 'readings' for T684: *hok* (Cordán 1963: 72, 76; Barthel 1968); *pedz* (Taack 1976); or, *pat* (see Part 3 of this monograph).

Summary of the Contextual Evidence

In summary, the behavior of T757 in its many different contexts provides clues towards its decipherment which may be characterized as follows:

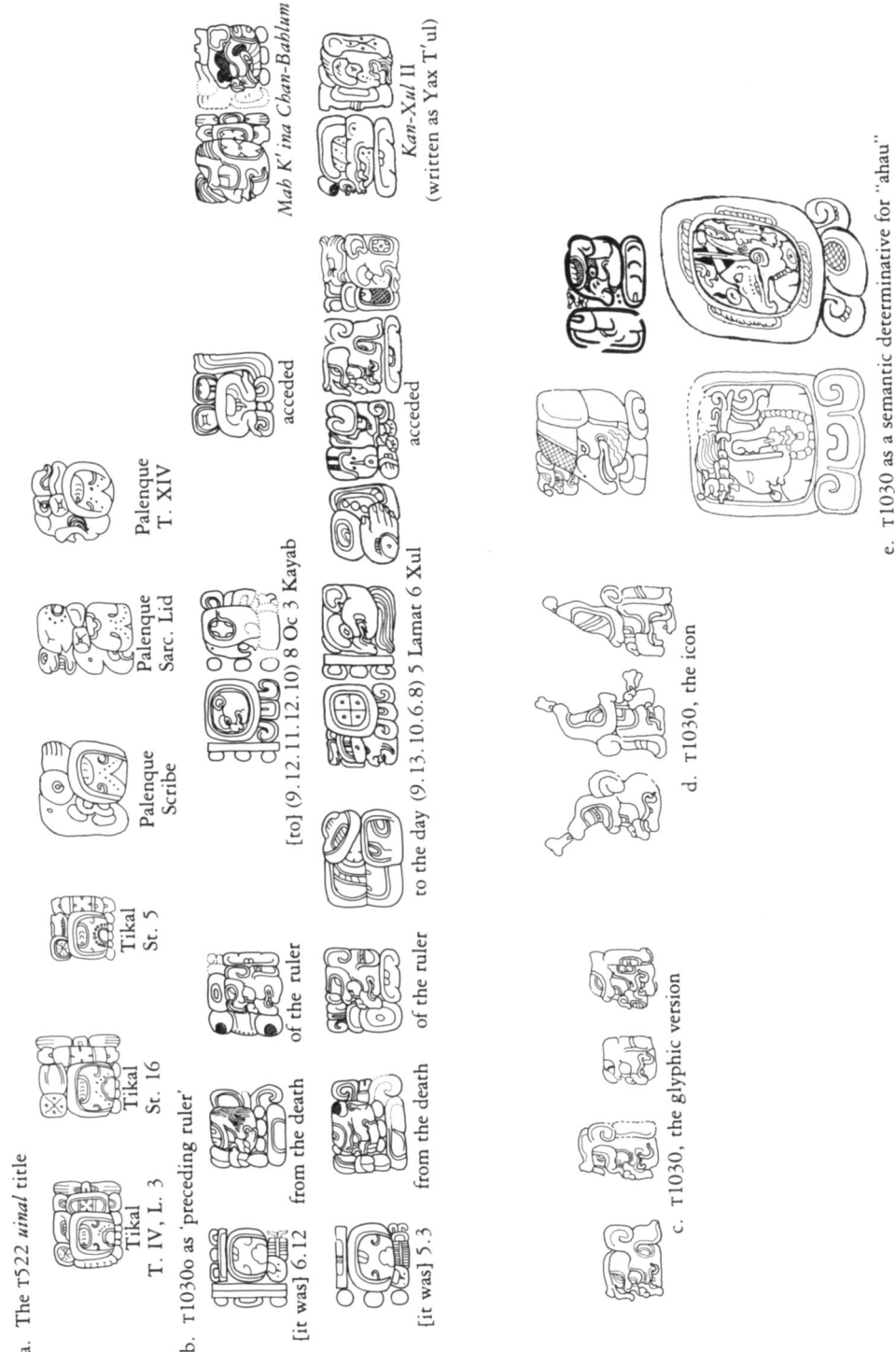
1) The animal head has the characteristic teeth of rodents or rodentlike animals. It has a lolling tongue, a small eye, and in most cases, a short ear, although in a number of examples, it appears with a long ear.

2) The T1 *u*-bracket (or its equivalents) appears more frequently with T757 than with any other glyph and in contexts which do not allow grammatically for its function as a third person pronoun. As a noun and as the name of the animal T1 must function phonetically, therefore, as the first syllable of a word beginning with *u*.

3) T757, without the *u* prefix, may substitute for the day sign *Muluc* and in turn *muluc* may be replaced by an inverted jar in the context of the day sign, Anterior and Posterior Date Indicators, and in a divinity title. Furthermore, *muluc* (T513) in upright position (T580) substitutes for T757 in the blood-letting metaphor used for the "child of parent" expression. These substitution patterns predict that the second syllable for the T757 animal must correspond to a word for the ninth day (*muluc* in Western Maya and *toh* in Eastern Maya) and for a round-bottomed jar.

4) T757, without *u*, substitutes for T501 in *bacab* (T501.25:501) and *batab* (T1030m and T501:87) titles. In these contexts, the phonetic value of T501 and T757 is clearly *ba*, but in the *mac* glyph and context of the "scattering" glyph, T501 must have the value *ma* and is, therefore, polyvalent (*ma* and *ba*). Since T501.102 (*mal* or *bal*) can also replace T757 in the 18 JOG name and as a general and auxiliary verb, the second syllable of the animal

Figure 16



should read *mal* or *bal*, and since T757 also substitutes for T513 and T580 *mul*, the evidence seems to favor a reading of the second syllable of the T1.757 animal as *mal* or *mul*.

5) T757, T758, and T513 all appear in Glyph B of the Lunar Series; however, T287, which can appear also in Glyph B, appears to be the direct substitute for T758 and not the other two glyphs. T287 among its other functions occurs as a locative preposition in the Dresden Codex and can be identified as the glyphic representation of a pair of 'eyes'; *ich* is both 'eye' and a locative preposition ("in") in (at least) Yucatec. As a phonetic substitution for T758, the "eyes" (T287) suggest that T758 represents an animal named by a term such as *ich*, *ichich*, *chich*. Since T758 has the same rodent characteristics as T757, it must represent some rodentlike animal which is substitutable either phonetically or semantically with both the T757 animal and *muluc*.

6) T1.757 functions as a generalized verb which also appears as the auxiliary verb in auxiliary verb + *ti* + verbal noun constructions found especially on the lintels of Yaxchilan and on the stelae of Naranjo. Since T1.757 can also appear as the first unit of verbal phrases which do not include the *ti* locative (or an equivalent), any reading proposed for it must match its appearance as a general, auxiliary, and modal verb. Furthermore, since on Tikal Temple IV, Lintel 3, T1 is eliminated when T181 appears as verbal suffix to T757, it is likely that T1 functions as a third person inflection in verbal contexts. The verbal root, which corresponds only to T757, should read, therefore, as *mal* (*mul*) or *bal* based on the previously discussed substitution criteria.

7) Since T1.757 often appears as a verb situated between the name phrase of a child and his mother, it must represent some verbal concept which is appropriate to a child in regard to his mother.

8) T757, with or without *u* and very often with T60 as a superfix, appears in a prepositional phrase following the T713 accession verb. Since the title

assumed in this accession event is recorded by the glyphs above T713 in the first glyph of the phrase, the T757 prepositional phrase should record some concept, such as "succession."

9) The frequent presence of T60 as an affix to T757 in verbal and accession contexts must be explained by any proposed reading.

Linguistic Data

The evidence from phonetic substitution in all of the above contexts suggests that T1.757 represents some rodentlike animal named *umul*, *ubal*, or *umal* and that it is substitutable in some way for T758, another rodentlike animal possibly called *ich*, *ichich*, or *chich*. The three terms in the Mayan languages for 'rabbit', an animal with rodentlike teeth, are given in Table 3. Two of these three words correspond to two of the terms above, predicted by phonetic substitution. In Aguacatec, Ixil, Uspantec, Quiche, Tzutuhil, Achi, Cakchiquel, Pocoman, Pocomchi, and Kekchi, 'rabbit' is *umul* (or *imul*), the term predicted by the *muluc* substitution. In Tojolabal, Chuj, Jacalteco, and Mam, 'rabbit' is *chich* (or a cognate), a term predicted by the T758 and T287 substitution. In Yucatec, Itza, Mopan, Lacandon, Chontal, Chorti, Cholti, Chol, Tzeltal, and Tzotzil, 'rabbit' is *t'ul* (or a cognate). Interestingly, there is an old term in Yucatec for 'rabbit' which may be related to the Eastern Maya term *umul*; in the Motul (639), the Solis Alcala (149), and the Pio Perez (229) dictionaries 'rabbit' is glossed as *muy*. Jeffrey Miller (personal communication, 1975) was given *hmuy* as the word for 'rabbit' by a modern Yucatec informant with the specification that it was a very old word and found mostly in place names.

The distribution of the three words for 'rabbit' are interesting because they do not match geographically the boundaries of the language families. Yucatec has *muy* which may be related to the Eastern Maya *umul*, while Ixil, a Mamean language, has *umul*, rather than *šik* as do the other

TABLE 3. RABBIT

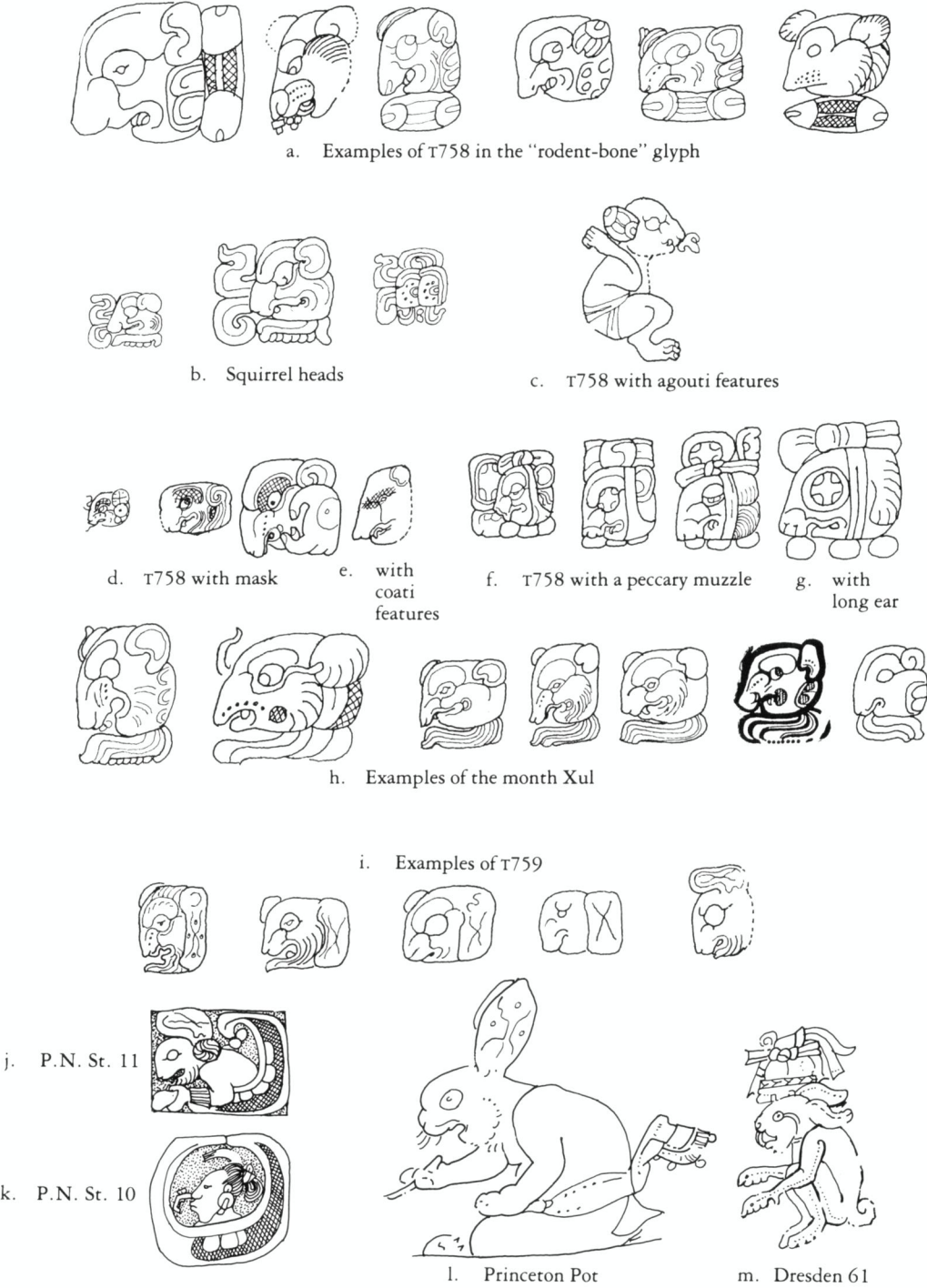
Yucatec	t'u'ul	muy, humuy
Itza	t'u'ul	
Mopan	t'u'ul	
Lacandon	t'u'ul	
Cholti	t'ul	
Chontal	t'ul	
Chol	t'ul, t'uhl	
Tzeltal	t'ul	
Tzotzil	t'ul	
Tojolabal	čič	
Chuj	čič	
Jacalteco	šʔik (Day)	
	čik (La Farge)	
Mam	šik, iš čik	
Aguacatec		umul
Ixil		umul
Uspantec		umul, imul
Tzutujil		umul
Quiche		umul, imul
Achi		umul
Cakchiquel		umul
Pocoman		emol, imul
Pocomchi		imul, mul (Mayers)
Kekchi		imul
Huastec		koy

Mamean languages. The proto-Maya word for 'rabbit' is unsure, but Kaufman (n.d.) has tentatively suggested that *t'ul* may have been a Classic innovation. This suggestion leaves open the possibility that 'rabbit' was *umul* at the time of the origin of the writing system and during the very Early Classic period. The presence of *muy* in Yucatec seems to support an early distribution of *umul* in Maya languages.

The presence of three distinct words for rabbit may well be reflected in the writing system itself. There are three distinct glyphs with rodent features in the writing system: r757, the glyph under discussion; r758, the Glyph B animal and the main sign of the month Xul; and r759, a head with the long ear of the rabbit. Furthermore, these three heads appear in the writing system at different times, with r757, in the Early Classic

form of r788, being the most ancient. T1.788 appears with great frequency on Early Classic texts from throughout the Maya area, including pottery and jade texts, wall paintings, and on monumental texts such as Stela 4 and Stela 31 of Tikal. In the Early Classic period, I know of no occurrences of r758 (outside of *xul* month glyphs) which can be distinguished from r788; even when r788 appears with the T110 bone (Fig. 9b), the animal head has exactly the same features as other Early Classic examples of the glyph. By 9.4.0.0.0 (514 A.D.) r788 had begun to look like a proper animal (see Fig. 9b, the E.C. Panel), and it is at about this time that I think r758 and r757 evolved into distinct glyphs; but even into the Post-Classic period, the features of the two glyphs were confused. In the Dresden Codex, both glyphs appear with the phonetic value *ba*

Figure 17. T758, a general glyph for “animal”



while in the Classic period only T757 could be read this way. In addition, T758 can be found with the lolling tongue of T757 (Fig. 9c). T759, the version with a long ear, does not appear in the inscriptions until the Late Classic period after 9.13.0.0.0 (692 A.D.). It has the same general head shape as T757 and T758 as well as the same eye configuration, but it is distinguished by a prominent fur ruff along the jaw (which is characteristic of T788) and a long ear (Fig. 9d), which can appear optionally on T757.

Although the graphemic distinctions among the three animal heads were maintained to a great degree, there is sufficient exchange of characteristics in ceramic, codex, and Classic examples to suspect that while each glyph originally represented different words, they all represent the same animal. In order to clarify the ambiguity resulting from the subsequent use of these three glyphs, I suggest that the three graphemes originated at different times and perhaps in different languages. T757 is the most ancient of the three; it appears on very early monuments at Tikal, on early pottery, and perhaps in proto-Classic Maya texts. Its substitution patterns strongly suggest that the first syllable was *u* and the second *mul* or *mal*. *Umul* is “rabbit” in the Eastern Maya languages, and of these words it has the widest distribution (including perhaps *muy* in Yucatec). However, from the time of its earliest appearances, the primary function of T757 was as a general and auxiliary verb, not as a logograph for ‘rabbit’, and, as a result of this function, I suggest that it was frozen as a phonetic glyph representing the sound of the frequently used verb.

In time, especially with the introduction of Glyph B into the Lunar Series, I believe that T758 evolved as a glyph distinct from T757, specifically to record logographically, ‘rabbit’. However, in time, T758, like T757, appears to have undergone a development which resulted in ambiguity (although of a different type). Because of the substitution of T287 for T758, it appears likely that the original grapheme developed based on *chich*,

“rabbit” in the Central Maya languages. The proto-Maya word seems to have been *čik*, rather than *čič*, but since T758 does not appear as a distinct glyph in the writing system until after 500 A.D., *čič* is certainly eligible as the original base for the grapheme. It is clear from a comparison of examples of T758, however, that it did not remain only the logograph for ‘rabbit’ because it appears with the distinct features of many animals. T758 appears with the front teeth of a rabbit (Fig. 17a), the eye of a squirrel (Fig. 17b), the paws of an agouti (Fig. 17c), the mask of a raccoon or possum (Fig. 17d), the teeth and long muzzle of a coati (Fig. 17e), and the nose of a peccary (Fig. 17f), with the long ear and fur ruff of a rabbit (Fig. 17g). T758 functions as a blank glyph for ‘animal’ in general to which the distinctive features of particular species are attached as semantic determinatives. This general function of T758 as animal seems to be reflected by its appearance as the month glyph Xul. The Eastern Maya name for this month is *tzikin*, a general term for “bird,” but in Kekchi there are two general terms for bird, *tzikin* and *xul* (which also functions as a general term for “animal”). It appears that the Yucatec term for this month may have been borrowed as the wrong “bird” term or as the general term for “animal.” In either case, T758 functions as a general sign for small animals to which specific distinctive features were added, and *xul* in at least one language is a general term for “animal.” With T758 functioning as a general animal glyph, confusion was possible as to the identity of the unmarked glyph if the context was not absolutely clear; I suggest for this reason a third and distinctive glyph was developed sometime after 600 A.D. This glyph retained the head shape, eye configuration, and fur ruff of the earlier versions, but it was distinguished by the long ear. I suggest it was based on the Classic innovation *t’ul* and that its function was exclusively as the logograph for ‘rabbit’ (Fig. 17i).

The lack of distinct boundaries between T757 and T758 seems to be reflected in modern Maya

languages and can be found in the terms for “moon” and “month.” The Classic Maya, like other Mesoamerican peoples, saw the image of a rabbit on the moon and this “moon-rabbit” often shows up in glyphic and pictorial contexts. On the Tablet of the 96 Glyphs at Palenque (Fig. 18a), the “moon-rabbit” appears in the center of the T181 lunar suffix, not for any phonetic or semantic function, but because there is a rabbit on the face of the moon (Fig. 18d, f). A number of the encised obsidians found as stelae caches at Tikal and Uaxactun show the rabbit held by the moon-goddess inside a lunar crescent (Fig. 18e). At Piedras Negras, the rabbit (Fig. 17j, k) and the moon-goddess appear inside of the moon sign in sky bands. The rabbit, who in this case has not yet lost his tail, is held by a deity inside a full lunar sign on Sculptured Panel No. 1 at Bonampak (Fig. 18c). The association of the moon with rabbit is reflected by entries in Chuh (Hopkins n.d.b: 246) in which *čič* is glossed as “rabbit” and *čiči* as “aunt, daughter’s sibling, moon.” The association of “moon” and “rabbit” in Chuh may well be based on the widely spread practice of calling the “moon” by the principal female kinship term, but in Tzeltal and Yucatec *čič* (*chich*) is associated with special terms for months in the lives of infants, although in each language *ʔu* is the word for moon. In Tzeltal (Slocum y Gerdel 1965: 133), *chich* is glossed as “(el) mes (se usa durante el primer año de vida).” In Yucatec, *chich* is “niño de tres meses que aunque salga al sol no pestañas” (Motul: 307) and *ix coo chich* is “alunado, tomado de luna” (Motul: 473). Edmonson (1965: 27) glosses “lunar month” as *chiuh*; a term which may be related to the *chich* entries above. In none of the languages above is *chich* a term for either “rabbit” or “moon,” but in all it is related to the concept of lunar months, months in an infant’s life, or to being lunatic.

Evidence for a Reading of T757

Graphic Origin and Physical Characteristics

Of the three related graphemes T757, T758, and T759, the latter is the most rabbitlike because of the consistent presence of the long ear, a characteristic which appears intermittently with T757. The Eastern Cotton Tail (*Sylvilagus floridanus*) has an ear length like that of T759, but the Tropical Forest Rabbit (*Sylvilagus brasiliensis*) has unusually short ears which may have been the model for the short-eared T757 and T758 (Fig. 9g, h).

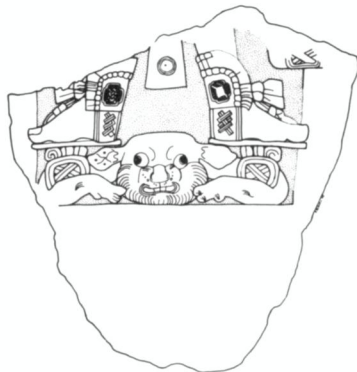
The lolling tongue of T757 does not relate to any known attribute of the rabbit (Dr. A. Gardner, Smithsonian Institute, personal communication, 1976), but as Proskouriakoff (1968: 248) pointed out, it is a characteristic of dogs and deer. Since deer and rabbit are closely associated in Mesoamerican and Maya myth, it is through this linkage, perhaps, that T757 became graphically characterized by a lolling tongue. T759, the Late Classic rabbit, is glyphically and pictorially associated with the moon while T765, a brocket deer distinguished from T759 by the addition of a horn and crossed-bones as the eye, appears as the head variant of *k'in* (the sun) in Distance Numbers (Schele 1977: 52, 54). The skulls of these two animals are the head variant of the bone (T570) variant of the Palenque Emblem Glyph. In many Mesoamerican myths and in many Maya stories, the deer and the rabbit are twins and often represent the moon and the sun. They share the physical characteristics of long ears, timidity, short tails (often featured in stories explaining the loss of their tails), and excrement which is remarkably similar in appearance although different in size. Perhaps most importantly, both animals have the unique characteristic of a split lip; in Chuh “hare lip” is *čič tiʔ*, “rabbit mouth” (Hopkins n.d.b).

This latter characteristic of the split lip of the rabbit is uniquely characteristic of deer and rabbit among Mesoamerican fauna, and may be used, therefore, as a particularly important attribute to identify the short-eared animals upon which T757

Figure 18. The rabbit and the moon



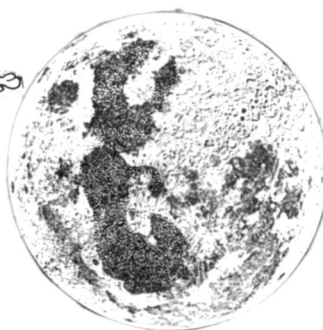
a. Palenque
96 Glyphs,
detail of D5



b. Naranjo
St. 40



c. Bonampak Altar 2 and detail



d. The moon with the rabbit emphasized

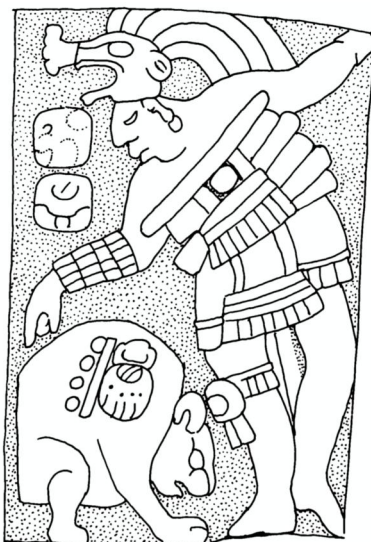


e. Eccentric obsidians from Tikal

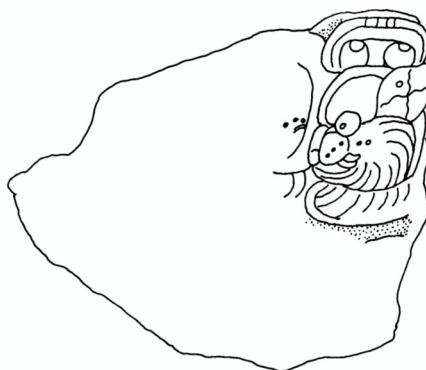


f. The moon

Figure 19. The rabbit and the ballgame

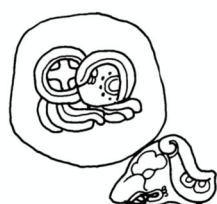
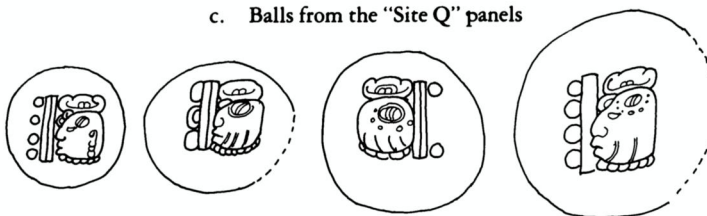


a. Carved bottle of unknown provenience

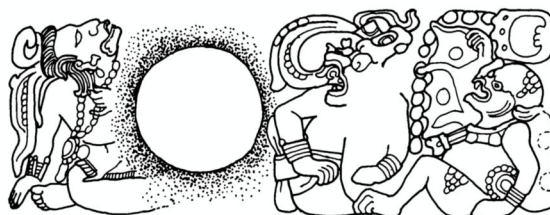


b. Caracol Frag. 56

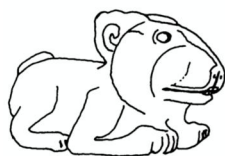
c. Balls from the "Site Q" panels



d. Copan, center ballcourt marker



e. Copan Stela D (A7-B7)



f. Alabaster rabbit from Tikal, Burial 195



g. Bonampak Stela 2



h. Bonampak Room 2

and T758 are graphically based. Two such short-eared animals were found as alabaster models in Burial 195 at Tikal (Fig. 19f). Both statues have a short tail and ears rendered in exactly the same configuration as the T757 and T758 animals, but in addition, they both have split lips, a characteristic only of rabbits, and not of moles, agouti, squirrels, or any of the other rodents in the Maya region. Thus these two alabaster sculptures show that rabbits were rendered with short ears, which supports the proposal that T757 and T758 often represent rabbits.

The confirmation of T757 as rabbit is found in the association of rabbits with the ballgame. In the *Popol Vuh*, the rabbit plays a large part in the conspiracy to recover Hunahpu's head which he has injudiciously lost to the Camazotz'. In order to trick the lords of the Underworld, Xbalamque, brother of Hunahpu, asks the animals to bring their foods, from which he chooses a pumpkin; with the aid of *Hu r Aqan*, the pumpkin is shaped into an animated replacement of the lost head of Hunahpu. Anticipating a ballgame at dawn with the lords of death, Xbalamque instructs the rabbit to wait in a patch of tomatoes adjacent to the ballcourt. Should the ball land in the patch, the rabbit is to bounce away like the ball in order to draw the lords of death after him, thus freeing Xbalamque to retrieve his brother's head (the ball) and place it back on the body. The *Popol Vuh* (Edmonson 1971: 126–127) describes the ensuing action as follows:

And so the rulers of Hell hit the ball
 And Jaguar Deer returned it,
 And the ball stopped before the ring.
 It hit it,
 Then it went up,
 And suddenly the ball passed over the court,
 Just one
 Just two bounces, stopping in the tomatoes.
 And the Rabbit went bounding off
 And then they went after him.
 The chase was on

By those of Hell.
 They whooshed;
 They zoomed.
 They went after that Rabbit.
 All Hell wound up going.
 And it was then that Hunter's head could be
 snared,
 And Jaguar Deer's pumpkin planted again.

A scene of the Rabbit impersonating a ball is known from a small carved bottle (Fig. 19a). A ballplayer is poised in the instant before he strikes the ball with his knee. The ball, a four-legged, short-eared animal is similar in its head features to both T757 and T758; most importantly, it has short ears and a glyph—IX.na:b(a)—inscribed on its back. This same glyph with different numbers (9, 12, and 14) is found inscribed on the balls from looted ballgame panels (Fig. 19c) which Peter Mathews (personal communication, 1980) has identified as being from the site tentatively identified as Calakmul (Miller 1974) and designated by Mathews as "Site Q." Although the animal on the carved bottle does not have the distinguishing *kan* cross and lolling tongue of T757, the presence of the IX.na:b(a) glyph clearly identifies it as a personification of the ball, and the *Popol Vuh* records the ball impersonator as a rabbit.

The association of rabbits in general and T757 specifically with the ball is supported by evidence from Copan. On the central ballcourt marker from Copan, the scene shows both players attacking the ball, but the right figure holds an animal head in his hand with which he strikes the ball. The animal head has the same general features as T757 and T758, but it is marked as 'rabbit' by the long ear and front teeth (Fig. 19d).

However, at Copan, the specific association of the ball with rabbit (and T757) is most clearly seen on Stela D. The sculptors of Stela D were forced to cope with serious technical problems caused by the presence of spheres of uncarvable chert within the core of the stela shaft. It must be assumed that

the sculptors were aware of the chert flaws before designing the monument since the flaws are incorporated into the design of the stela sides. One particularly difficult chert flaw occurs on the rear surface which carries the inscription, recording the period-ending 9.15.10.0.0. The upper part of the shaft is clear of flaws, and records the Initial Series date and the Lord of the Night (A1–A5), followed by a verbal phrase (B5–B6). The name of the subject, 18-JOG, occurs at A7–B7 where a chert flaw surfaces on the right side of the left glyph (Fig. 19d). The carved elements of the name phrase are clearly recognizable: A7a is the full figure variant of the number XVIII; B7a is the full figure version of God K, a consistent element in the 18-JOG name (Fig. 12); and B7b is the full figure version of the Copan Emblem Glyph. The T1.757 component of the name phrase is not present; therefore it must be assumed that it is not a vital part of the name phrase (an unlikely possibility since it occurs in every other instance of this name) or it must be assumed that there is some reference to the 757 component in the name itself (and it should be noted that T1 or an equivalent is always present in the name, but absent here). The positioning of the other glyphic components (especially the number XVIII) around the chert flaw suggests that the sculptor was aware of its presence before the glyphs were designed. For example, the flaw is centered precisely in the right half of the first name glyph, a position too precise to be a coincidental discovery after the text was designed. Furthermore, the chert sphere has been deliberately featured; the surrounding area is recessed so that the roundness of the ball can be perceived. It is, in fact, the ball from the ballgame. The chert ball has been incorporated into the text as a pictorial reference to the ball of the ballgame, a substitution for the rabbit head normally found in the name. On the carved bottle (Fig. 19a) the rabbit replaces the ball; on Copan Stela D (Fig. 19e), the ball replaces the rabbit.

Two additional substitutions confirm the asso-

ciation and interchangeability of T757, T758, and T759 in Classic Maya texts. Bonampak Stela 2 shows a blood-letting scene in which the ruler, Chaan-Muan, is flanked by two women. The woman to his front is not explicitly named, but since the protagonist of the second event is named as the mother of Chaan-Muan, it can be assumed that the unnamed woman in the scene is also the subject of the verb and the mother of the protagonist. The woman behind Chaan-Muan is named by a verbless text (Fig. 19g) immediately over her head as “Lady Yax-T’ul” (T1000a.16:759), with titles or additional names, “Lady Ahpo of Yaxchilan; Lady Bacab.” Mary Miller (personal communication, 1980) has discovered that the same woman is named in the prisoner scene in the murals of Room 2 at Bonampak. In this instance, however, her name is written as “Lady ?? Rabbit (T1000a.??:T757 or 758); Lady Ahpo of Yaxchilan; Lady Bacab” (Fig. 19h). The presence of the Yaxchilan Emblem Glyph in both name phrases clearly identifies both figures as the same woman, but on Stela 2 the animal head is T759, while in Room 2, it is either T757 or T758. The animal head does not have the *kan* cross of T757, but it does have the short ear of both T757 and 758, as well as the lolling tongue of T757. In either case the short-eared animal can directly substitute for the long-eared rabbit.

The identification of the short-eared animal as interchangeable with T759 is reinforced by a single example recorded in Thompson’s gray cards (Card 479) as being from Caracol Fragment 56. Thompson recorded that this glyph is preceded by Cauac and that whatever followed it was lost. The animal is short eared, like T757 and T758, but it has the crossed lines in its ears characteristic of T759. Furthermore, it is preceded by T1, a configuration that Thompson (1962: 360) only records once in the monumental inscriptions. Although the full context of the Caracol example cannot be reconstructed, I suspect that this example is an auxiliary verb normally re-

coded as T1:757. In any case, this example demonstrates that T759 can occur in a short-eared configuration like T757 and T758.

The Substitution Patterns and Linguistic Values

Glyph B of the Lunar Series. T757 and T758, both identified as graphs based on a rabbit, appear as infixes in Glyph B, which appears immediately before Glyph A (the number of days in the particular lunation) in the Lunar Series. Teeple (1930: 62) suggested that the T187 ‘elbow’ in Glyph B might represent the stylized cross section of a house and that Glyph B recorded the particular house of the moon. His suggestion has pictorial merit since the crossbands motif that characterizes the T187 ‘elbow’ also appears on houses in the codices. If Teeple’s suggestion is correct, the presence of T757 or T758 in the ‘house’ is a pictorial representation of the rabbit, who is, on the face of the moon, in his house. The appearance of T758 in the house (or T287:110) is based on the *chich* grapheme, while T1.757 (and it should be remembered that T757 often appears with its own individual *u*-bracket in addition to that prefixed to Glyph B) is the *umul* based rabbit. The substitution of T758:110 and T287:110 is phonetic; that of T1.757 for T758:110 is semantic (rabbit for rabbit); and that of T513 *muluc* (or *mul*) for T1.757 is again phonetic.

The proposal that Glyph B is a conceptual representation of the moon rabbit in his house is supported by two lunar series recording the dark phase of the moon. Mary Miller (n.d.) in her discussion of the initial date of the painted inscription at Bonampak presented evidence to support the reading 9.18.0.3.4 10 Kan 2 Kayab. In her discussion, she pointed out that this date occurred during the dark phase of the moon and that the T758:110 animal is removed from the Glyph B elbow bracket, placed into an individual glyph block, and replaced by a turtle head in Glyph B. In other words, on the dark of the moon, the rabbit is not in his house, but a turtle

(the meaning of which is not known) has replaced him.

Lounsbury (personal communication, 1982) has confirmed that the Bonampak date occurred during the dark phase of the moon and pointed out another text similar to that of Bonampak. 9.17.0.0.0 was the date of a lunar conjunction, and using this as a base, Lounsbury has calculated that 9.17.10.0.0 was 2.73 days short of a lunar conjunction. This date is recorded on Quirigua Zomorph B with the moon age of 27 days, a position in the dark of the moon. Glyph B on this monument shows the T758 animal carrying Glyph X in a tump line while his house is occupied by the same turtle as in the Bonampak text. Again in the dark phase of the moon, the T758 animal is not in his house.

T757, Muluc, and the Inverted Jar. When T757 appears as the day sign for the ninth day Muluc, it occurs without the *u*-bracket suggesting that only the last syllable of the rabbit word *umul* is substitutable for T513 *mul*. Both T757 and T513 can be replaced in another phonetic substitution by an inverted jar which is *mulul* or *mal* (see Table 4) in the Eastern Highland languages. The appearance of *muluc* and other phonetic glyphs for *mul* (T757 and the inverted jar) in the Anterior and Posterior Date Indicators, as well as the *mul* to *mal* shift in the words for jar, can be seen in the numerical classifiers for the count of “times” (*veces*) in Quiche and Yucatec (Table 4). Furthermore, the *mul/mal* terms interlock with *t’ul* as terms associated with the “pouring” or “sprinkling of water.”

As can be seen in Table 4, the numerical classifier for the count of times (*veces*) is *mul* in Quiche, but *mal* in Yucatec. The same *u/a* correspondence can be seen in the term for water jar or vase, which is *mulul* in Quiche, Uspantec, and Pocoman; *mul* in Huastec; and *mal* and *mulul* in Kekchi. In addition, both *mul* and *mal* have associations with the overflowing, spilling, or pouring out of water, a concept which may very well

TABLE 4. CLASSIFIER FOR THE COUNT OF “TIMES,” THE WORD FOR JAR OR VASE, AND WATER ASSOCIATIONS

CLASSIFIER FOR THE COUNT OF “TIMES”

Yucatec	<i>mal</i>	cuenta para veces (Motul: 597).
	<i>mal</i>	unido á un número siver para contar las veces se repite alguna operación, acto ó manipulación de lo hace (Pio Perez: 55).
Mopan	<i>maan</i>	vueltas (Ulrich and Ulrich 1976: 125).
Tzeltal	<i>mehl</i>	vez (Slocum and Gerdel 1965: 110).
Tzotzil	<i>moj</i>	clasificador numeral de veces o vueltas (García de Leon 1971: 60).
Quiche	<i>mul</i>	time, turn, rotation, revolution.
	<i>hu mul</i>	once
	<i>nabe mul</i>	the first time (Edmonson 1965: 74).
Cakchiquel	<i>mul</i>	particular numeral parar contar: numero de veces.
	<i>jumul</i>	una vez (Saenz 1940: 275).

JAR OR VASE

Quiche	<i>mulul</i>	clay pot, jar (Edmonson 1965: 75).
Uspantec	<i>mulul</i>	jicara (Stoll 1896: 214)
Pocoman	<i>mulul</i>	jicara (Teletor 1959: 155).
Kekchi	<i>maal</i>	hacha, vaso (Sedat 1955: 104).
	<i>mulul</i>	clase de tecomate (Sedat 1955: 109).
Teco	<i>muunuul</i>	“water gourd”
Huastec	<i>mul</i>	cántaro (Larsen 1955: 46).

WATER ASSOCIATIONS

Yucatec	<i>bul</i>	sumir en el agua algo; zambullir, sumir en agua, hundirse.
	<i>buulul</i>	sumirse en el agua; anegarse, sumergirse en algún líquido.
	<i>buleb</i>	jarro.
	<i>buleb-bil</i>	jarro para sacar agua.
	<i>bulkabil</i>	diluvio o aguaducho; diluvio general ³ (Barrera Vasquez 1980: 69–70).
Chol	<i>mul</i>	mojar (Aulie and Aulie 1978: 82).
Tzeltal	<i>mal</i>	rebosar lo lleno.
	<i>malbil</i>	derramado.
	<i>mul</i>	sumir debajo de la agua.
	<i>mulen</i>	sumido; mulul, mulbil.
	<i>mul</i>	act; meter totalmente debajo del agua (Guzman n.d.: 71r).
	<i>mal</i>	(classifier for) “pours of water.”
	<i>mal</i>	to pour liquid (Berlin 1968: 204).
	<i>mal</i>	derramar, ponerse el sol (Robles 1966: 49).
	<i>malel</i>	derramar (Slocum and Gerdel 1965: 160).
	<i>mul</i>	dip/hair, water jug, water gourd, or stick in water.
Tzotzil	<i>mul</i>	be dipped (water jug, water gourd, or stick in water).
	<i>mul</i>	dips/head in water.
	<i>mal</i>	set (sun), overflow, spill (Laughlin 1975: 244).
	<i>mal</i>	(tv) spill; (iv) overflow, spill.
	<i>mal k'ak'al</i>	have the sun set (Laughlin n.d.: 354).
	<i>mul</i>	(tv) put underwater, sink; (iv) sink (Laughlin n.d.: 383).

PROTO-GREATER TZELTAL

<i>mal</i>	verter (Kaufman 1972: 109).
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³Barrera Vasquez (1980: 69, 489) lists the following glosses for *bul* and *mal*: *bul*: todo, entero, completo; *bul ak'ab*: toda la noche. *mal* [todo, toda]; *mal k'in*: todo el día; *mal ak'ab*: toda la noche.

be related to the fact that 1) the round-bottomed jar is very likely a water jar, and 2) that its inverted position seems to reflect an act of pouring out the contents. Furthermore, in Mesoamerica, the association of the moon and water vessels on both a linguistic and pictorial level is documented in the Mixtec and Borgia Group codices.

Neuenschwander (n.d.: 12) reports that the Achi use hand gestures describing the crescent moon in both wet and dry seasons as a vessel from which water (rain) either can or cannot escape. There are no Classic Maya pictorial examples of a direct association between the moon and a water jar, but since the rabbit is marked on the face of the moon, the water (inverted jar)/moon connection may be reflected in the phonetic play between T757 and the up-ended jar or the (u)mul/mul substitution pattern. However, the association between one of the other rabbit words, *t'ul* and the "pouring out or spilling of water" and between a round-bottomed jar and rabbit (*t'ul*) can be demonstrated as follows:

Yucatec

t'ul, *t'ulnah* chorrear el agua de la ropa del que se ha mohado ó empapado (Pio Perez 1866–77: 356).

Ix Kan Itzam Tul la-preciosa-bruja del agua-a-chorros (Barrera Vasquez in Kelley 1976: 104).

Tzeltal

t'ulel verter (Slocum and Gerdel 1965: 192).

t'ulan gotearlo (Stross, personal communication, 1978).

t'ululet correr como la resina de la tea (Guzman: 109)

Tzotzil

t'ul rabbit, eastern cotton tail. Rabbits are hunted frequently. They are roasted and eaten. They are "cold." Their skins are used for pouches to carry bullets and wads. Rabbits are renowned for their cleverness.

t'ul small potful (of beans).

t'ulanob small pot (Laughlin 1975: 359).

Quiche

t'uy water gourd, large water jar (Edmonson 1965: 138).

Kekchi

t'ululinc el agua en forma de chorro.

/na/t'ulnac liquido cayendo constantemente.

/na/t'ulbac el agua (de lluvia) cayendo recio (Sedat 1955: 153).

Thus, it can be seen that *t'ul* as well as *mul/mal* is found associated with jars and with the spilling, overflowing, and dripping of water, a state which is reflected, perhaps, in the inverted position of the jar. The *mul* and *t'ul* terms participate in a semantic set involving the day Muluc, a round-bottomed jar, and water. In Tzeltal, Tzotzil, and Kekchi, both *t'ul* and *mul/mal* appear with these associations.

T757 and T501. T757 and T501 have been shown to be interchangeable in two contexts: the 18 JOG name and the T501.25:501 *bacab* title. In the previous discussion of the 18 JOG substitution pattern, it was shown that TXVIII.501:342/1030 replaced TXVIII.1.757 on Stela 32 at Naranjo and that because of the appearance of T501 as *ba* in the *bacab* and *batab* title, a reading for the name could be tested as *Uaxaclahun Uba* or *Uaxaclahun Uma*. There is no animal named *Uba* in the Maya languages, but *Uma* is remarkably close to the *umul* word for "rabbit." If T314 is a phonetic complement to give the final *l* or if T501 like T757 could be read *mal*, the reading is remarkably close, giving *umal* as the reading of the phonetic version, and perhaps *umul* for the head variant with T757.

However, *umul* is the Eastern Maya word for "rabbit," and it is problematic to assign an Eastern reading to a name that appears not only at Copan and Quirigua but also at Tikal and Naranjo in the Central Peten. Influential linguistic contact between Classic Cholan speakers and speakers of Eastern Maya languages can be more easily posited for Copan and Quirigua than for Tikal and Naranjo. However, the wide distribution of the *Uaxaclahun Umul* name argues for its

entry into the royal naming system at a very early level; and during the Proto-Classic and very Early Classic periods, there is good archaeological evidence for contact between the Peten and the Highlands in which the Highland cultures were prestige partners. It might be argued, therefore, that the *Uaxaclahun Umul* name was archaic and inherited from a Pre-Classic cultural strata in which speakers of Eastern Maya were active participants. However, if Kaufman's suggestion of the Classic innovation of *t'ul* as a word for rabbit in the Western Maya languages is correct, then *umul* may well have been the word for rabbit at the time of the development of the writing system, and *Uaxaclahun Umul* would then have entered the tradition of royal names as a legitimate form which was later frozen when the *t'ul* rabbit term entered the writing system. The royal naming systems so far deciphered at various sites are marked by the sort of conservatism and ancestral emphasis which would result in just such frozen forms.

The substitutions of T757 for T501 in the *bacab* and *batab* titles clearly provide contexts in which both glyphs function with a phonetic value of *ba* rather than *ma* or *mal*. The polyvalency of T501 seems well established by these two contexts and the *mac* phonetic glyph and "scattering" glyphs. This polyvalency appears to be reflected by the existence of three 'imix' glyphs, two of which are marked to insure distinctive readings: T501 with crosshatching in the center, or with waterlily foliation, is *naab*, both "waterlily" and "lake," or "ocean"; T501 with T178 (inverted *ahau*) in the center is exclusively *ma*; and unmarked T501 is either *ma* or *ba*. This *m/b* correspondence is not a regular pattern of phonetic change in Maya languages, but it can be detected in several contexts. There is a family name in Mopan (Ventur, personal communication, 1976) which is pronounced as both *matab* and *batab*; final *b'* in most Maya languages becomes final *b'*, *w'*, or *m'* in Pocomchi; *lem*, the root for "flashing" and "bright" in many Maya languages, becomes *leb* in Tzotzil;

and the word for "submerge" and "inundate" is *bul* in Yucatec, but *mul* in Tzotzil and Tzeltal.

The polyvalency of T501 and T757 in the *bacab* and *batab* titles may have been less ambiguous than is evident at first since the context of both is always clearly titular and both are widespread and frequently used. Furthermore, only one example of the T757:87 *batab* substitution is known, and when T757 appears in the T501.25:501 *bacab* title, one, but never both, of the T501 glyphs may be replaced by T757. In both contexts, convention and repetition would have made the *ba* value for both T501 and T757 abundantly clear without danger of ambiguity. It is only in this title context that T757 appears with an undisputed *ba* value.

T757 as a General and Auxiliary Verb and in Parentage Statements. Proskouriakoff's (1968) identification of T1.757 as an introductory glyph which records some statement such as "Here is portrayed (or recorded) . . . ," "In commemoration of . . . ," has been confirmed by the identification of this glyph as a general verb which appears in many different contexts. As an auxiliary verb, it is followed by *ti* + verbal noun phrases in a kind of syntactical structure which has been identified in modern Chol and other languages. Since, as a general verb, it is used to introduce clauses which name persons engaged in many different activities, it must represent very general concepts, such as "he was . . . ," or "he went. . . ." Both as a general verb and as an auxiliary verb in an event phrase known to record blood-letting, T1.757 has been shown to occur frequently before the T606 "child of (mother)" phrase and as a metaphor for "child of (parent)."

An examination of the substitution patterns in all of the above contexts has shown T1.757 to be replaced by T1.501:103 (*u.ma:al* or *umal*); by T13.60:501 (*u.ma: . . .*); and by T1.580 (*u.mul*). Furthermore, on Lintel 3, Temple IV at Tikal, the T757 verb appears between the name of Ruler B and the T606 "child of (mother)" glyphs as some verbal expression relating child to mother.

In this instance, it is followed by T181 verbal suffix and T1 *u* does not appear. The elimination of T1 in a context in which T757 appears with a verbal affix not usually (or ever) appearing with a Set A pronoun, suggests that T1 functions as an inflectional affix for the third person when T757 appears as a verb. If the last hypothesis is true, then the verbal root is represented by T757 alone which must record some widely used general and auxiliary verb. Since T1 functions as an inflectional pronoun, the root must be *mal* or *mul*.

One of the general verbs used in the auxiliary verb + *ti* + verbal noun constructions in Chol is *mahlel*, an intransitive verb derived in *-h-*, *-el* from the transitive verb *mal* (Josserand, Schele, and Hopkins n.d., and Josserand and Hopkins, field notes, 1978). *Mahlel* is glossed by Aulie and Aulie (1978: 78) as "ir" (to go) and "resultar" (to follow, result, proceed). Attanasi (n.d.) enters *mahlel* as follows:

mahl going.
mah-a-la go, become, get high, get drunk.
male modal: discrete action, "go and do."
mahl-el go.

In auxiliary verb expressions, *mal* may appear with either transitive or intransitive forms as in the following examples:

ča mahliy-on ti t'añ I went to speak.
mi k-mahl-el ti paši al I'm going for a walk.
lah mahl-el ti t'añ Let's go talk.

Mahlel also appears in linguistic contexts which seem to match those instances when T757 appears with complementary glyphs were *ti* is absent. In these contexts, the constructions imply "going" in a particular manner, as in the following examples:

Mi tãp' patañ mahlel ʔi ñaʔ yik'o yalobil The mother follows behind with the child (she follows behind going . . .).
Juan mi kuč-tak mahlel vaso ti mesa Juan carries vases to the table (Juan carries going . . .).
K'inčoh tehč-iyob mahlel Nauyacas rose up and

went after them (Nauyacas they rose up going . . .).

The Chol *mahlel* seems to be related to the Yucatec term for "pasar," *mal*, which can appear in the same kind of compounds as in the following examples:

Vienna (157v-156r):

pasar caminando a algun lugar *malel*, *mal*.
 pasar *mal*.
 pasarse el agua por vasija *yuk mal*.

Motul (597, 605):

mal, *mani*, *manac* passar generalmente por algun lugar.
manaan participio de *mal*, *malel* cosa que ya ha passado.
mal cimil sanar la enfermedad.
malel kin ti beel continuarse y durar en algun oficio.
malel ti tzec predicar y tratar de alguna cosa en el sermón especificándola en él.
malel tu beel hun pay seguir, ymitar a otro, pasar por donde el passó.
mal ákab hal passarse toda la noche o durar toda la noche.
mal haab todo el año.
mal kin todo el día.

San Francisco (230):

mal tu pach proceder, ir delante.

Perhaps more importantly, Barrera Vasquez (180: 498) lists *-mal* as a verb suffix with the following function:

-mal [irse efectuando la acción del verbo que marca la raíz]; *kuchmal*: irse culpando; *kukmal*: irse revolcando, rodando; *lop'mal*: irse encogiendo, arrugando; *puts'mal*: irse secando al sol; *potmal*: irse escabuyendo, aguje-reando.

T757 as a general and auxiliary verb seems to have been *mal*, a term for "go," "result," or "pass." It could be used alone as a general introductory verb without reference to the specific act

shown in a scene; with a complement, it apparently meant “to go doing something”; and, with *ti* + verbal noun, it meant “to go to do something.” All of these forms are still used in modern Chol, and none of the other Chol general verbs which can appear in the contexts described above remotely fit the phonetic reading of T1.757 predicted by its substitution patterns.

The meaning of “to go” or “to pass” for *mal* is particularly appropriate for a verb on the canoe bones from Burial 116 at Tikal. Mt38a-d (Fig. 20), have incised scenes of a canoe paddled by the Jaguar God of the Underworld and the Aged Stingray God. The passengers include four animals (the Kankin dog, a parrot, a spider monkey, and an iguana) and a young lord (presumably Ruler A), with the Jester God on his forehead. Kelley (1976: 236–237) proposed that this scene is based on the “theft of corn” myth, and that it is intended to be an allegory of Ruler A’s life. The texts on both bones begin with the Calendar Round 6 Akbal 16 Zac, which Kelley and Linton Satterthwaite placed at 9.11.19.4.3. No death date is known to be recorded for Ruler A, but Christopher Jones (1977: 45) placed the ‘accession’ of Ruler B at 9.15.3.6.8. Assuming that the accession of Ruler B occurred less than a year after the death of Ruler A, and that these canoe scenes are allegorical references to the life passage of Ruler A, the Calendar Round 6 Akbal 16 Zac may record the birth date of Ruler A, giving a maximum life span of 3.4.2.5 or 63 years, 74 days.

The five glyphs following the date are not yet understood, but the glyph at H1 appears to represent the canoe pictographically. H2 and H3 record the name phrase of Ruler A, and H4 is 4 katuns. The last glyph of the text is composed of T89 *tu* (the contraction of the locative preposition *ti* and the pronoun *u*), T502, the imix variant which is exclusively *ma*, and T178 *la*. The entire glyph reads *tu.ma:l(a)* or *tu mal*, “to his going [or passing].” The entire text may be paraphrased “he canoed Ruler A, [it was] 4 katuns to his going [or

passing].” The canoe verb is an allegorical reference to “birth” or to “living” and *tu mal* records the death of Ruler A. If 6 Akbal 16 Zac is the date of birth, Ruler A would have been in his fourth katun of life at age 3.4.2.5 as recorded in these texts.

The T713/757 ‘Accession’ Expression. T1.757 has been shown to appear in a prepositional phrase following a verbal glyph (T713) for the “taking of office” and a title which records the particular office taken in the ceremony of accession. The T757 prepositional phrase which follows must record not the office taken, but rather some concept roughly equivalent to “succession,” such as recorded by T188 in the alternative T684 and T644 accession expressions. Since T89 *tu* (*ti* + *u*), which always appears in the prepositional phrase, contains both a locative and a pronoun, it must be assumed that when a second *u* appears with T757, its function is phonetic and not inflectional. T1.757 as a noun for “succession” (or a related concept) is therefore, *umal*, *umul*, or *ubal*.

The function of T1.757 as a term for “succession” seems to be related to its origin as a glyph for “rabbit.” Edmonson (1965: 138) glossed *umuli* as a denominal verb meaning “hunt rabbits.” In Yucatec, the word for “rabbit” is also a denominal verb for “to pursue” and “to track,” as can be seen in the following glosses:

Motul (881–882):

thul ah, ub seguir por el rastro.

thulabal per seguido.

thul pach seguir o ymitar.

Vienna (184–185v):

seguir alguno, va a seguir por el rastro *thul*.

seguir perseguiendo para dañar *thulpach. s*

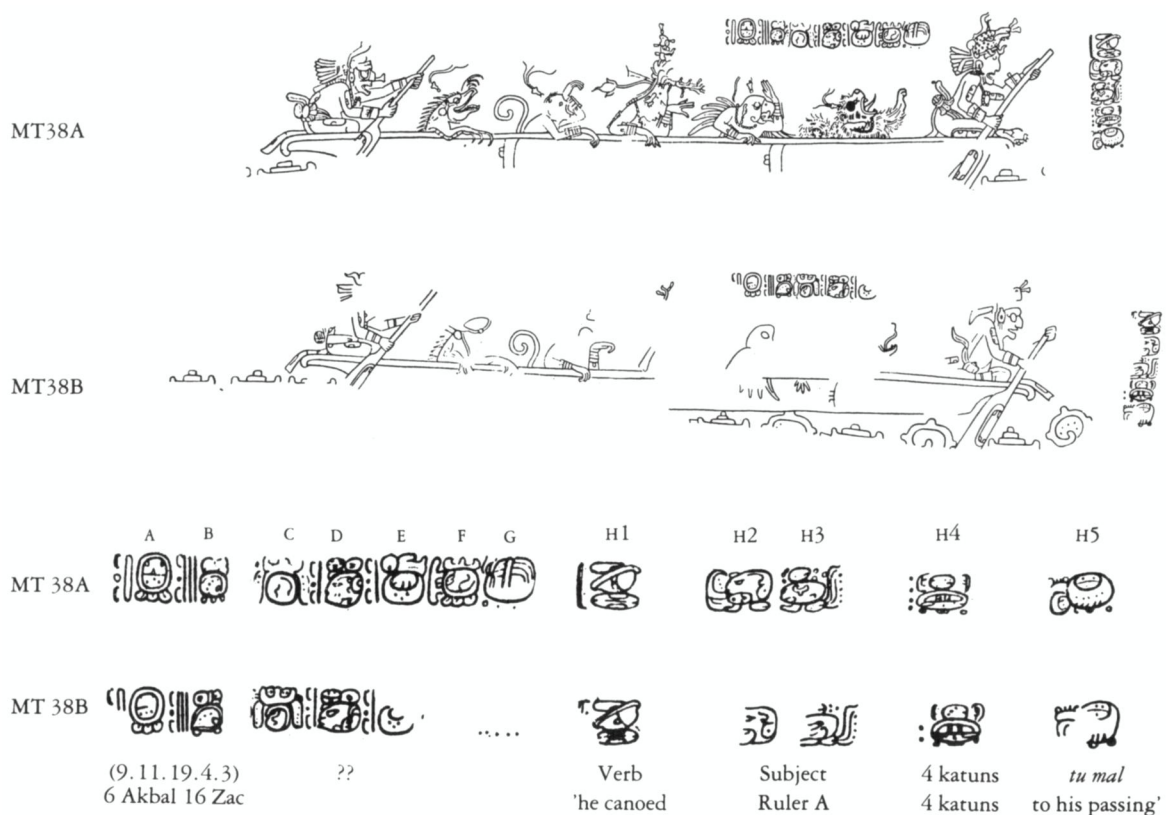
Pio Perez (356):

thul, thulah seguir los pasos.

thulpach el que sigue los pasos de otro, seguir el rastro, perseguir.

Robert Bruce (personal information, 1979) has

Figure 20. The Tikal canoe scenes



informed me that *t'ul* can be used as a denominal verb in Lacandon for "to hunt rabbits." In 1979, I was able to elicit a derived form of *t'ul* as "to hunt rabbits" in both Tzeltal and Chol. It seems clear that "rabbit," in a derived verbal form, was and is widely used as a term for hunting rabbits, and, by extension, as a term for "following spoor or the tracks of animals."

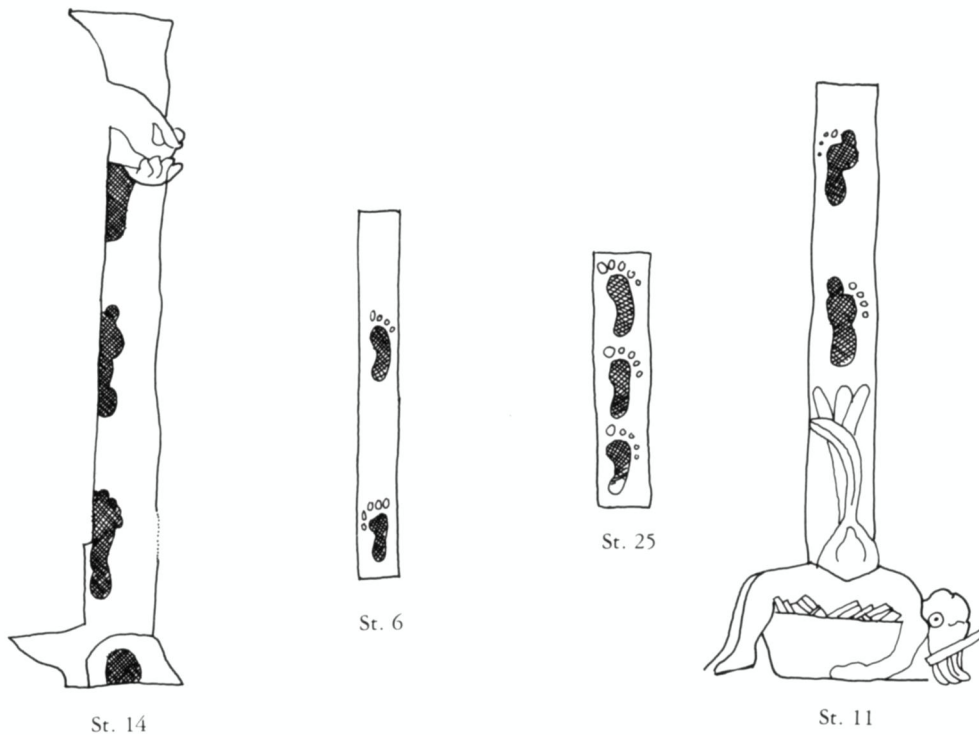
The Yucatec emphasis on the concept of tracking in terms of "to follow the footprints" appears in keeping with known Mixtec conventions, in which a footprinted track can be used as a device to clarify genealogical relationships (Troike, personal communication 1978). Thompson (1973) and Schele (1979) have called attention to the

elaborate rituals and pictorial records used to document proper genealogical descent both in the Classic and Post-Classic periods. C.C. Coggins (n.d.) pointed out the attempts of Ruler A of Tikal to establish visual and ritual connections between himself and the Early Classic ruler on Stela 31.

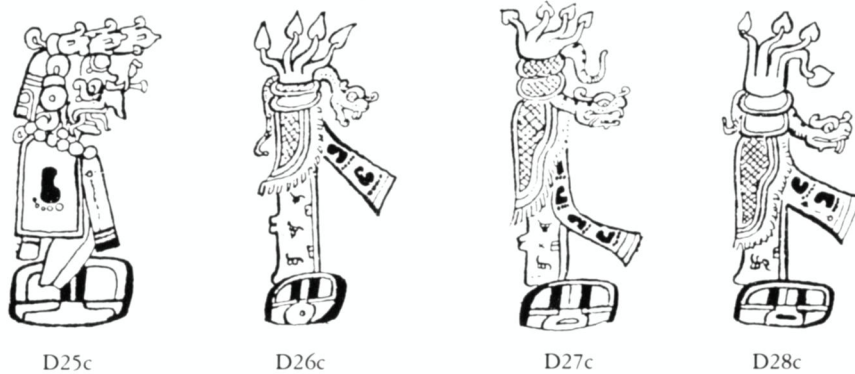
This preoccupation with genealogical descent in the Classic period is also witnessed by the prevalence of genealogical information in name phrases (Schele, Mathews, and Lounsbury n.d.) and by the frequent presence of parental figures in the compositions of public monuments. The flanking figures on the trifigure panels of Palenque and the figures in the upper registers of Yaxchilan stelae

Figure 21. Foot-printed cloth

a. Cloth motifs from 'ascension' stelae at Piedras Negras



b. Trees from the Dresden New Year's pages



are portraits of parents. Major texts and monuments, such as the Hieroglyphic Stairs at Copan, the Temple of Inscriptions at Tikal, the Early Classic lintels of Yaxchilan, the Tablets of the Cross and of the Inscriptions at Palenque, as well as the sarcophagus itself, all document ancestral activities and dynastic succession antecedent to the rulers who constructed these monuments. Historical events are linked not only to ancestral activities, but to the acts of personages in the remote mythological past and in the legendary past (Olmec times). It is my proposal that the T1.757 noun functions as a reference to this ancestral succession; that the act of "taking office" occurred within the context of the succession of the local lineage; and, that "succession" was expressed metaphorically as "rabbiting" or as "following the footprints of the ancestors."

The niched stelae of Piedras Negras provide evidence supporting the identification of T1.757 as a metaphorical reference to "succession." Proskouriakoff (1960: 460) demonstrated the correlation of the "ascension" motif from the niched stelae of Piedras Negras with the "beginning of a series of monuments dealing with a sequence of related dates. . . ." She called attention to the relationship of the pictorial scenes on these stelae to recorded inaugural practices in the *Chilam Balam* of Chumayel, and suggested that they represented a raising on high of the ruler.

A careful examination of "ascension" iconography at Piedras Negras shows the lord, seated on a pillow, in an elevated position reached by scaffolding. On every one of these stelae, a narrow piece of cloth is stretched from the groundline to the pillow below the lord, and in every case a path of left and right human footprints incised on these cloths, leading upward to the lord. He has assumed his position by "following the footprints" of his ancestors (Fig. 21a).

The relationship of the iconographic image of the footprinted cloth to the lexical item *t'ulpach* is even more detailed. *T'ul* is glossed as "cosa an-

gosta y estrecha [a narrow thing]" (Motul: 881), as well as "to follow." *Pach* (and its cognate *pat*) is the word for "back" and "behind"; it is associated with tribute cloth and the bark from which tribute cloth was made. *Pat* (or *patan*) is the term for tribute, for "to take office," and, I believe, the reading for the T684 "bundle" glyph. T60, the diagnostic knot of this bundle glyph, is often shown attached to T1.757 where I believe it functions as a directional complement ("behind"), and perhaps as an indirect reference to the "bundle." At Piedras Negras, the act of accession was recorded glyphically by the "bundle" glyph, but pictorially, it was expressed by showing the footprinted path of the ancestors on a narrow piece of cloth leading to the high seat of the ruler. At Palenque, the concept of taking office in the succession was metaphorically recorded as "following the footprints (rabbiting)," *t'ul pach*, but the pictorial representation of the act shows the presentation of the contents of opened bundles (Schele 1979) by the parents to the acceding child. The pictorial and glyphic records of the two sites use the same metaphorical bases, but the metaphor expressed pictorially at each site is rendered glyphically at the other.

The New Year's pages of the Dresden (D25-28) repeat the imagery of the footprinted cloth from Piedras Negras (Fig. 21b). The lower register on each of the four pages show *acantun* motifs, which Landa recorded as stone piles set at the four directional entries to the village. On D25c, the *acantun* shows God B dressed in a footprinted mantle. On D26c-28c, trees (marked as wood by *te* signs and as stone by *cauac* motifs) appear draped with a mantle and a long narrow piece of footprinted cloth. Maya phrases referring to the "feet of the year" (groups of forty days which reach the same day in the tzolkin with an addition of one to the numerical coefficient) are recorded in ethnohistorical sources as a computational device. The footprinted cloth (*t'ulpach* with *t'ul* as "follow the footprints" and *pach* as both "be-

hind" and as the "cloth") is shown on the *acantun* of the New Year's pages as a reference to time as the "footprints of the year"; it is not only a de-

scription of the image of the footprinted cloth, but it is also a known Maya device for the description of the passage of time.

Part 3: The T684 "Toothache" "Inaugural" Expression

PROSKOURIAKOFF (1960), in her first paper delineating the historical approach to the study of Maya hieroglyphic texts, identified T684 as an event glyph recording the inauguration of rulers into office. She associated this glyph with the "ascension" scenes of the niched stelae of Piedras Negras and demonstrated a similar pattern of function throughout the Classic Inscriptions. Proskouriakoff restricted the identification of T684 as an "inaugural" expression to those occurrences in which it appears with the specific Affix Cluster T59.168:188. Berlin (1968) extended Proskouriakoff's analysis to include the Tablet of the 96 Glyphs at Palenque on which the Affix Cluster appears with the T644 seating glyph in a context similar to the appearance of the T684 "inaugural" phrase at other sites. His analysis showed that in these specific contexts, the T644 'seating' expression is functionally equivalent to the T684 "inaugural" expression, although he suggested that the two events might represent the taking of different kinds of power—i.e. religious versus civil. Mathews and Schele (1974) showed that two other glyphic expressions occur in Palenque texts with the same name phrases and dates as the T644 'seating' expression identified by Berlin. Since alternative compounds (the T713/757, T700var, T644/188, and T684/188) occur repeatedly with the same name phrases and dates, it is probable that these compounds are *functionally equivalent*, i.e., that they record the same event, with different concepts, from different viewpoints, within different contexts, or with different lexical forms.

It has been proposed in Part I of this paper that two other compounds (T617:713.181 or T617/713 and T1030e) fall within this same event category, although these compounds may record the installation of the heir designate and other titles or offices. Proskouriakoff used "inaugural" as a general description term for the kind of event specified by the T684 "toothache" event; "inaugurate" means "to induct into office by a formal ceremony." Peter Mathews and I (1974) used the term "accession" to describe the general category of events that appear to be functionally equivalent to the T684 event; "accession" means "the attainment of rank or dignity" and "accede" means "to arrive at or come into an office or dignity." Throughout this paper, "accession" will be used to describe the general category of events and all non-T684 event glyphs, but I will retain Proskouriakoff's term "inaugural" to designate the T684 "toothache" event.

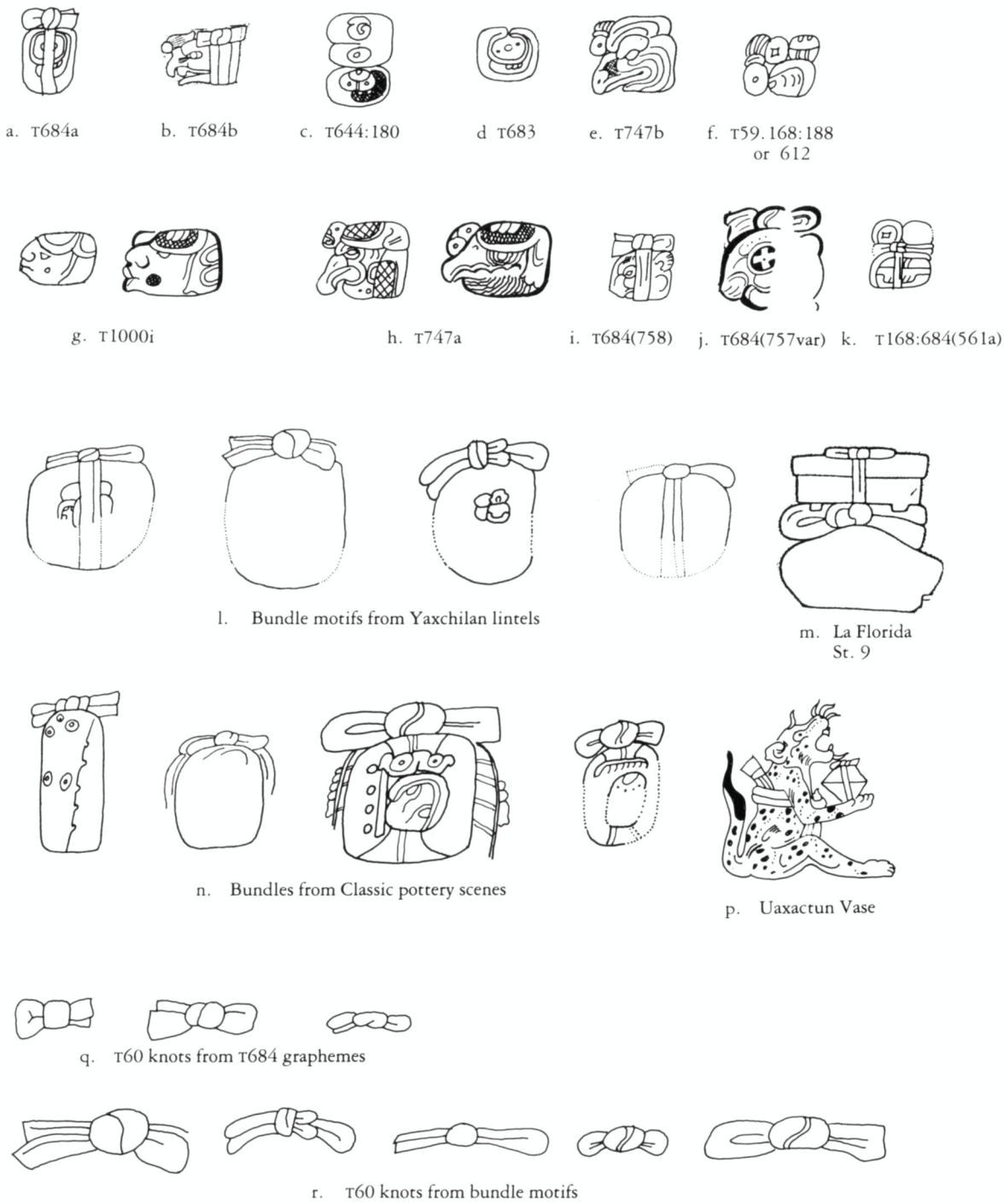
Since the work of Proskouriakoff and Berlin, several scholars have proposed "readings" for the T684 glyph. Taack (1976) in proposing the latest reading presented a detailed summary of the history of these proposed decipherments, all of which have substantial supportive evidence. The proposed "readings" are as follows:

Knorozov (1967: 84): *t'ul kaax* to hunt.

Evreinov, Kosarev, and Oustinov (1961, II: 264): *kal* to set a snare.

Cordan (1963:72): *hok ti* and *hokal ti* "to accede."

Figure 22. Bundles in glyphic and iconographic contexts



Barthel (1968: 135–137): *hok(kal)ah* “enthronement.”

Taack (1976: 34–36): *pedz'* trap, snare, to take an animal in such a trap; to squeeze something by placing something on top; to place someone in office or in high position.

Taack pointed out the apparent change in function of T684 between its Late Classic occurrences, where it appears primarily in “accession” contexts, and in the Post-Classic codices where it appears in a variety of contexts including scenes of apparent “trapping” by snare, pitfall, and deadfall. Each of the proposed decipherments listed above is based on the correlation of codical texts with their accompanying pictures. In all of these arguments, except Knorozov’s *t’ul kaax*, the proposals are based almost exclusively on the codical contexts and secondarily on the function of T684 as an accession event. Since each of these authors has eloquently presented his own argument, I will not summarize them, nor attempt to disprove each proposal; I will, rather, present in detail my argument for a reading of *pat* (or its cognate *pach*) for the T684 glyph.

The Graphemic Origin

As a grapheme, T684 represents a bundle tied by a long, narrow piece of cloth in a distinct knot (T60), which can also appear as an individual glyph (Fig. 22). The binding cloth may encircle several glyphs including the T683 lunar sign, T747b (the head variant of T59 *ti*), a variant of T758 or T757, the T561 *caan* -sky sign, and others (Fig. 22d, e, g, h, k). The enwrapping of the T758–757 animal head occurs only at Palenque in the name Kan-Xul and on Lintel 2 at Piedras Negras where it is the verb of a secondary text (Fig. 22i, j). In the vast majority of cases, especially as an “inaugural” verb, T684 enwraps either the T683 lunar sign or the T747b head variant of the locative preposition *ti* (T59).

The glyph T684 is identical in form to the “bundle” motif which plays an important role in

Maya pictorial scenes, especially on the lintels of Yaxchilan and in the murals of Bonampak. In pictorial contexts this bundle most often appears with an enshrouding cloth which may or may not be marked by glyphs (Fig. 22l). In the Bonampak murals, this bundle, shown with the obscuring wrap in Room 1, appears opened in Room 3 where its contents are used in a tongue mutilation rite. Merle Robertson (n.d.) has presented convincing evidence that the Yaxchilan bundles, like the one at Bonampak, hold blood-letting regalia, and that the blood-letting rite has been shown to have represented a prominent part of accession and ancestral rites during the Classic period (Proskouriakoff 1963–64; Joralemon 1974; and Schele 1976).

The bundle motif plays an important part in the iconography of accession and dynastic rites at Yaxchilan, and it appears repeatedly in palace scenes in Maya painting. Although in the vast majority of cases the contents are obscured, two vitally important examples exist in which the bound contents are visible—the Uaxactun Initial Series Pot and La Florida Stela 9. The Initial Series Pot is decorated by a palace scene with an enthroned ruler. Two elaborately dressed attendant figures are on his left and three on his right. One of the right-hand figures, a seated jaguar, holds a bundle motif (Fig. 22p) in which a diamond shaped object can be seen. Tozzer (1941: 143, note 684) suggested that this bound object could be associated not only with Yucatec sacrificial use of a bowl, but with a number of caches found below the floors at Uaxactun. These caches consisted of “two plain, redware dishes with flaring rims, one overturned and covering the other. Between these dishes were bones including skulls.” Tozzer further cites Thompson’s (1939: 196) find of similar caches, again with human bones, at San Jose, Belize. C. C. Coggins (n.d.) reports a similar cache (without bones) at Tikal. The use of a plate as a non-specialized lid for caches is known from Tikal burials and from Palenque burials and caches (Rands, personal

communication, 1975). It is likely that the bound object shown on the Uaxactun pot is a picture of one of these nonspecialized cache vessels in ritual use before its burial.

Stela 9 of La Florida shows another kind of cache vessel as the object in a bundle. Two bundles, the lower of which has the enshrouding cloth, are shown at the feet of a female figure (Fig. 22m). The binding cloth of the lower bundle is rotated ninety degrees away from normal so that it cannot be seen except as the r60 knot. The binding cloth of the upper bundle is perpendicular to the viewer and wrapped around a specialized cache vessel very similar in form to others known from archaeological contexts at Palenque. It is not possible to determine from the profile view whether the shape of the La Florida vessel was round or square, but the detailing of the feet and the specialized lid closely resembles the form of the Palenque cache vessel (Rands, personal communication, 1975; Ruz, 1952: lam. XXVIII). The association of the bundle with cache vessels known from archaeological contexts is reinforced by the Maya practice of caching Early Classic altars, bound by bundle motifs, under Late Classic stelae at Copan.

Ethnohistorical sources also provide information on the meaning of bundles in Pre-Conquest Maya cultures. Two of the great examples of Maya literature, the *Chilam Balam of Chumayel* of the Yucatec and the *Popol Vuh* of the Quiche, mention bundles prominently in accession and dynastic passages. The fifth question in the "Interrogation of the Chiefs" in the *Chilam Balam of Chumayel* (Roys, 1933: 91) is as follows:

This is the fifth question which will be asked of them. They shall be told to go and get the heart of God the Father in heaven. "Then you shall bring me thirteen layers wrapped in a course white fabric." This is the heart of God the Father, of which they are told: it is a bead of precious stone. This is what the covering of thirteen layers is, which is mentioned. It is an enormous tortilla. Thirteen layers of beans are in it. This is what the white fabric is, it is a white mantle. . . .

The *Popol Vuh* also associates bundles with the rites and power of rulership. As the four Progenitors of the Quiche took leave of their people, they left the following signs:

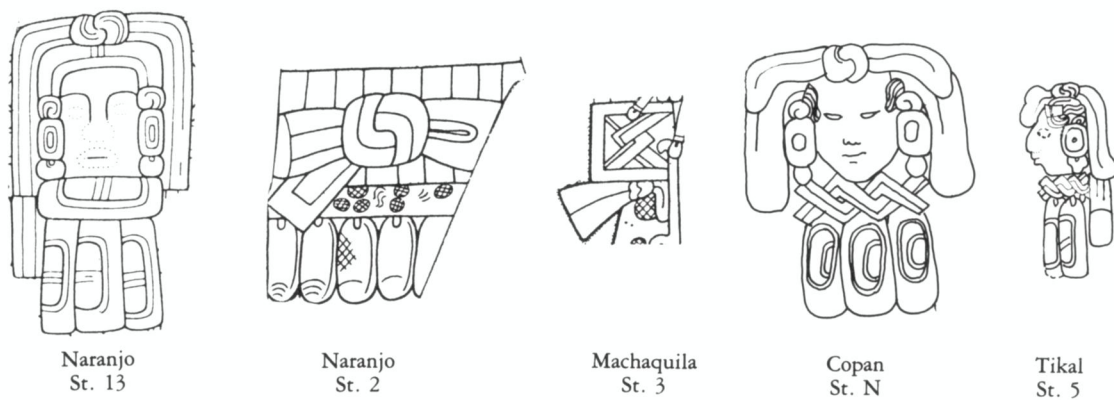
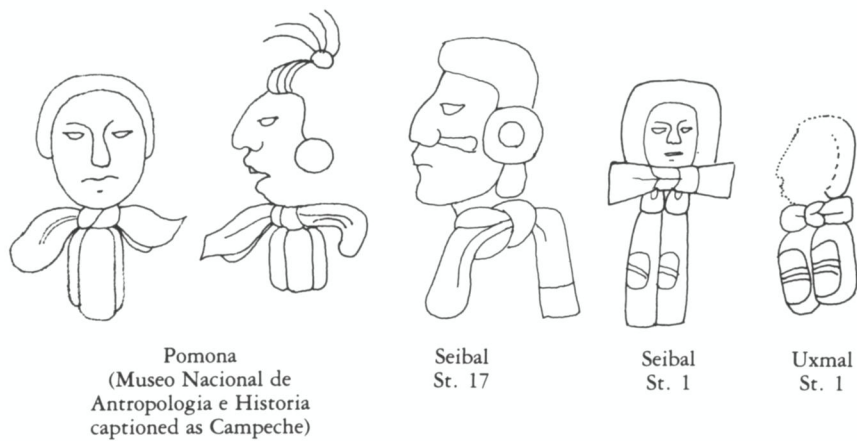
These words they said when they bade farewell. Then *Balam-Quitze'* left the symbol of his being: "This is a remembrance which I leave for you. This shall be your power. I take my leave with sorrow," he added. Then he left the symbol of his being, the *Pizom-Gagal*, as it was called, whose form was invisible because it was wrapped up and could not be unwrapped; the seam did not show because it was not seen when they wrapped it up. . . . They remembered their fathers; great was the glory of the bundle to them. Never did they unwrap it, but it was always with them. Bundle of Greatness they called it when they extolled and named that which their fathers had left in their care as a symbol of their being (Recinos 1950: 205-206).

Morley (Recinos 1950: 204), in a footnote accompanying the reference to the *Pizom Gagal*, commented on the widespread use throughout Mesoamerica of the bundle in association with royal office and the political charter of persons eligible for that office, and with the ancestral beginnings of dynasties.

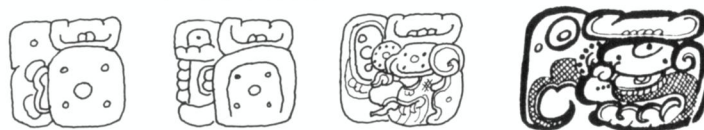
Bundles appear in the Yucatecan source as a part of the procedures to legitimize potential holders of office. Among the Quiche and Cakchiquel, the bundle was a gift left by the first rulers of each people as a remembrance and as a legitimizing object for Quichean power. The occurrence of the glyphic version of this bundle (r684) as the sign recording "inauguration into office," the appearance of the bundle motif in association pictures of archaeologically known types of cache vessels, and the consistent presence of bundles in palace scenes, accession rites, and ancestral blood-letting rites, indicate that the Post-Conquest references in the *Chilam Balam of Chumayel* and the *Popol Vuh* are a continuation of a very ancient Maya tradition. Since the bundle is recorded in these and other sources as containing objects left by dynastic founders and as legitimization objects of power, it is little wonder that the bundle appears as one of the major glyphs for "accession" in the Classic period.

Figure 23. τ_{60} knots in belt motifs

a. Belt motifs with τ_{60} “knots”



b. *Ab Nabe* with τ_{228} , τ_{238} , and τ_{181}



c. Naranjo, HS, T1 “throne” as *po* in T168



τ60 as the Allograph of the τ684 Bundle












I completely agree with Taack's (1976) observations on the special association of τ60 with the "bundle" glyph and his suggestion of its function as a determinative for the glyph. Since the bundle can be shown with the binding cloth rotated ninety degrees, and therefore parallel to the line of view (and unseen by the viewer), the presence of the τ60 knot is critical to the identification of this particular bundle. In addition, other objects may be shown with vertical binding strings, but without the τ60 knot, these alternative motifs are unlikely to be equivalent to the τ684 bundle. Since τ60 is so critically diagnostic of the bundle, and since τ60 rarely appears in other contexts, it seems that it can stand for the "bundle" without the mass of the bundle appearing. The principal glyphic environments for τ60 seems to support its identification with the bundle; it appears as the main sign in Glyph F of the Supplementary Series and it can appear as the sign for the office in the τ713/757 accession expression (Fig. 15a, j-r).

The function of τ60 as a reference to τ684 is also extended to the regalia worn to designate royal personages. The τ60 knot can substitute for

the "mirror" (τ617a) or the mat in the τ1000c-i *ahau*/plaque motif (Fig. 23), in a combination that identifies the ruler as a "Lord of the Bundle." In addition, the τ60 knot, often in elaborated form, is frequently shown draped over the *ahau* head in this belt motif (Figs. 7, 23), so that a reference to the "bundle" is included even when the ruler is identified as "Lord of the Mat" and "Lord of the Mirror."

Structural Analysis of the τ684 "Inaugural" Expression

The τ684 "inaugural" expression consists of a verbal glyph and a prepositional phrase that names the inaugural office of the ruler. Since all verbal and temporal affixes are always attached to τ684 and not the following prepositional phrase, it is possible to identify τ684 as the verbal component of the expression. The components of the prepositional phrase can vary, but since the very same variations occur after the τ644 "seating" verb, it can be assumed that the prepositional phrase functions in the same manner for both verbs. The components of the τ684 "inaugural" phrase are as follows (see also Figs. 24, 25):

- 1) τ684  with τ181  and/or τ126  or τ679 
- 2) τ683 
- 3) τ59  or τ747b 
- 4) τ168  or τ747a  or τ1000e  or other titles
- 5) τ188 

Analysis of the components of the T684 "inaugural" expression are as follows:

T683

T683 is the lunar sign which appears as the number twenty (*k'al* in many Maya languages) in both Classic inscriptions and the codices. Thompson (1972: 34) accepted the *k'al* values for T683 as do most other epigraphers, but in addition he proposed *k'al* as the value of T181, the verbal suffix, by associating the function of the verbal suffix with *u k'al*, a Putun expression which apparently functions in the Paxbolon texts as an expression of agency ("his doing"). However, T1, long recognized from Landa's "alphabet" as the third person marker *u*, never appears between the main sign of a verbal glyph and T181. *U k'al*, therefore, seems an unlikely reading for T181 in Classic and codical inscriptions.

Thompson (1962: 448) catalogued three graphically distinct versions of the lunar postfix under two numbers, T180 and T181. Although he apparently assumed that these three graphemes were distinct, it is now apparent that they are versions of T181. One of the examples under T180 is the normal T181 grapheme with the head of a rabbit drawn in its center. A similar example can be found on Yaxchilan Lintel 44 on which the skull appearing in Glyph C is shown inside T181. In both of these examples as well as others, the image drawn within T181 seems to be a visual play on the images seen on the face of the actual moon. It is known that the Maya saw a rabbit in the moon, and, based on the drawings on the eccentric obsidians from Uaxactun and Tikal, I believe they also saw the face and/or body of the moon goddess and perhaps a skull.








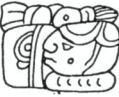


























































The second example under T180 is a full version of T181 which includes T178 *la* as an infix. This configuration of affixes is especially prevalent at Palenque, but if one examines all of the seating verbs (T644) in the Classic inscriptions, it becomes evident that T178 is often associated with T181 (Fig. 25). Furthermore, this T178.T181























































(or T683[T178]) configuration appears in free substitution with T130.T16 (*-wa.n* or *-wan*), and Kaufman and Norman (n.d.) have reconstructed *-wan* as an intransitive suffix in the completive aspect for positional verbs in proto-Cholan. The equivalent suffix for positional verbs in the Yucatecan languages is *-lah*, composed of the inchoative suffix *-l-* and the "past" suffix *-ah*. The same inchoative suffix survives in Chol as the completive aspect on positionals, as in *buch-l-e* "he sat," and in the instrumental noun forms of positionals, as in *buch-l-ib* "seat." Since *-ah* (T181) appears to be a past aspect marker (or perhaps a perfective suffix) in the Classic inscriptions, *-l-ah* is a possible positional affix pattern for Classic Cholan.

The phonetic value *-ah* for T181 (and its unsuppressed versions T180 and T683) was proposed by Knorozov (1967: 79) based on Landa's "alphabet," which contains three distinct *a* signs (Tozzer 1941: 170). Landa's first *a* is T228, a turtle beak, and his second is T238, a macaw beak. Both T228 and T238 appear in free substitution with T12, the sign identified by Proskouriakoff (1963-64: 155) as *ah*, the agentive particle.

A fourth *a* appears in Landa's example of the "spelling" of *ha*, "water." In an earlier example, Landa demonstrated the "spelling" of the word *le* "noose" and described his instructions to his informant as follows (Tozzer 1941: 169): "in order to write it (*le*) with their characters, *we having made them understand that there are two letters. . . .*" The Maya informant apparently took Landa's instructions seriously and gave him the signs needed to spell the sound of the Spanish letters, *l* (pronounced *e-le*) and *e* and the single syllabary sign *le*. The same kind of misunderstanding is evident in the "spelling" of *ha*, which includes three signs. The first two signs of the *ha* sequence also appear in the "alphabet" as the first *a* (and *a* is written under this sign in the *ha* sequence) and the sign recorded for the letter *h*, pronounced *a-che* in Spanish. Since the *h* sign appears in the codices in a number of different glyphs where *che*
















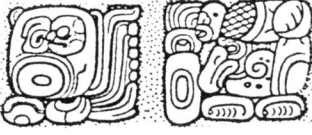









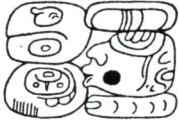



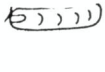




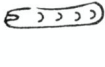
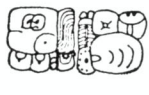









Figure 24. Structural analysis of the T684 inaugural phrase





































	Full Phrase	T684 with Verbal and Other Affixes	Infixes: T683, etc.	Locative	T168 or Substitute	T612 or T188	Other Graphemes or Substitute Compounds
a. Yaxchilan St. 11							
b. Yaxchilan L. 3							
c. P.N. St. 36							
d. P.N. L. 2							
e. P.N. St. 25							
f. P.N. St. 25							
g. P.N. St. 25							
h. P.N. St. 14							
i. P.N. St. 15							
j. P.N. St. 16							
k. P.N. Throne 1							
l. P.N. L. 3							

	Full Phrase	T684 with Verbal and Other Affixes	Infixes: T683, etc.	Locative	T168 or Substitute	T612 or T188	Other Graphemes or Substitute Compounds
m. P.N. Altar 2							
n. Aguateca St. 1							
p. Dos Pilas St. 8							
q. Bonampak St. 2							
r. Copan, T. 11 east wall, north door							
s. El Cayo L. 1							
t. El Cayo L. 2							
u. Naranjo St. 6							
v. Naranjo St. 20							
w. Tikal St. 4							

Note: The structural analysis of each phrase is arranged to be read horizontally, with the full phrase followed by the individual elements. The comparisons read vertically, with the full phrases and individual elements arranged in columns.

Figure 25. Structural analysis of the T644 “seating” phrase

	Full Phrase	T644 with Verbal and Other Affixes	Locative	T168 or Substitute	T612 or T188 or Equivalents
a. Copan T. 11 east wall, north door					
b. Copan T. 11 west wall, south door					
c. Yaxchilan St. 12					
d. Dos Pilas St. 8					
e. Palenque 96 Glyphs					
f. Palenque 96 Glyphs					
g. Palenque 96 Glyphs					
h. Palenque TI 1					
i. Palenque TI 1					

	Full Phrase	T644 with Verbal and Other Affixes	Locative	T168 or Substitute	T612 or T188 or Equivalents
j. Palenque TI 1					
k. Palenque Pal. Tab.					
l. Tikal T. I, L. 3					
m. Tikal St. 21					
n. Tikal St. 22					
p. Palenque TI 1					
q. Palenque TI 3					
r. Lacanja L. 1					

is the most likely value, it seems that the first two signs in the *ha* sequence “spell” the sounds of the Spanish letter *a-che*. One would then expect the third sign to record the second letter in the Spanish spelling, the *a* in *ha*. This third sign very closely resembles T181, the verbal suffix.

However, in addition to the evidence for the value *ah* for T181 supplied by Landa’s example, T181 appears as a prefix to a number of titles, specifically T181.23:585 (*Ah Nabe*). In most of the examples of this title at Palenque, T181 functions as the prefix, but on the lintel from Lacanja now in the Dumbarton Oaks Collection, this title appears with T228 as the prefix. Since T228 is known to function as the male article and to have the value *a* or *ah*, its substitution for T181 confirms the value *ah* for both glyphs (Fig. 23b).

Although the particular grammatical function of T181 has not yet been determined, it clearly occurs with both root intransitive and transitive verbs, and should represent some inflectional function, such as a completive or perhaps perfective suffix. Here I do not argue the grammatical function of T181, but I do argue that the inclusion of T683 (the full version of T181) in the “bundle” glyph is a device used to incorporate a verbal suffix into a spatially awkward glyph. An examination of the structural analysis of T684 event phrases (Fig. 24) seems to confirm this hypothesis. In all but one example, T181 appears with the bundle glyph only when some glyph other than T683 is incorporated into the bundle. The single example which includes both T683 and T181 is found on El Cayo Lintel 2 (Fig. 24t). The appearance of both lunar signs in one compound may be explained by graphic reduplication, a practice found consistently throughout the writing system; however, the inclusion of both graphemes in one glyph is rare enough for us to assume that it was not the normal configuration. In addition, there are several examples of T684/188 at Copan (Fig. 24r) in which neither lunar sign appears and in which T168 is shown flanking the vertical section of the binding cloth. The absence of the

lunar sign in these and other examples (Fig. 24c, e–g) suggests that it is not a required component of the verbal expression as would be expected if the verb appeared in different inflections and/or derivations.

T59 and T747b

Thompson (1971: 38, 294) identified T59 as the locative preposition *ti*, “at, on, to, for, etc.” and demonstrated the substitution of T747b, a vulture head, for T59. The substitution of the vulture head for *ti* appears to be based on the Chol name for the black-headed vulture *taʔhol* (“excrement head”). The substitution of *taʔ* for *ti* may seem strange, but whereas this locative is *ti* in the Yucatecan languages, Chorti, and Chol, it is *ta* in Tzeltal and Tzotzil and *ti*, *tí*, and *ta* in Chontal (Smailus 1975: 168, 171).

The *taʔhol* vulture should not be confused with the *ahau* vulture because either or both may appear in the T684 “inaugural” expression. The two signs are graphically distinguished by the presence of T59 as a phonetic complement on the forehead of the *taʔhol* vulture (T747b) and by an *ahau* scarf as a semantic determinative on the head of the *ahau* vulture (T747a). In many cases, where T747b *ti* appears, it is shown infixed into the bundle in place of T683 (Fig. 24c, e, f, w), but it may also appear in a separate glyph block (Fig. 24a).

An examination of the structural analysis of the T644 “accession” expressions (Fig. 25) shows that other locatives may replace T59 and T747b. The alternative locatives appear to be both phonetically and/or semantically equivalent to *ti* and, therefore, do not alter the structure or meaning of the prepositional phrase. T103 (Fig. 25e, f, i–k) has been identified as *ta* by Mathews (personal communication, 1979), but no value has been proposed for T53 (Fig. 25g–h) although its identification as a locative is clear from its glyphic contexts.

T168, T747b, T1000e, and Other Titles

Lounsbury (1973) presented convincing evi-

dence for a reading of T168 as *Ah pop* or *Ahpo*, a title with extensive documentation in Colonial sources. The title is literally translated as "He of the Mat" and loosely as "royal" or "ruler." The case for Lounsbury's reading has been strengthened by recognition of the extensive presence of the *po* grapheme on thrones both in pottery and monument scenes throughout the Classic period and by the substitution of a Jaguar-covered throne pillow for the "*po*" sign in the title at T1 on the Hieroglyphic Stairway at Naranjo (Fig. 23c).

The comparative analysis of the T684 "inaugural" and T644 "seating" phrases adds further supportive evidence for a reading of T168 as *ahpo*. Both T1000e, a head of a young male with an *ahau* scarf, and T747b, the *ahau* vulture, can replace T168 in both expressions (Fig. 24b, p, Fig. 25d, f, g). The same substitution pattern of T168 and T1000e/T747b can be found in numbered katun titles and in phrases recording the anniversaries of accessions. Both T747b and T1000e are shown by Thompson (1971: Fig. 11) to be versions of the day *ahau* and their value as titles is clearly *ahau*.

Only T168 *ahpo* and T747b/T1000e *ahau* appear as the titles in the T684 "inaugural" expressions, but in the T644 "seating" expressions, other titles can replace *ahau* and *ahpo*. At Tikal (Fig. 25l-n), *ahau* and *ahpo* do not appear, but rather the rulers are called by the T1030l-n *batab* and the T74:528.515 title. On El Cayo Lintels 1 and 2 (Fig. 24s-t) and Lacanja Lintel 1 (Fig. 25r) the title recorded is T563.181:24, a glyph which seems to refer to the cloth staff on Yaxchilan Lintels 9 and 33 and Stela 11. T1030-o (the Jester God; Fig. 25j), T518 (Fig. 25p), T60:757 (Fig. 25k), and other glyphs may follow the locative in both the T684 and T644 expressions, but in most of these cases, T188 does not appear.

T188

Taack (1976) proposed an identification for T188 as the Classic allograph of the Post-Classic grapheme T612, and suggested a reading of *el* or *hel* for this glyph. While I agree with his identifi-

cation of T188 as the Classic version of T612, I do not accept his proposed reading. The similarity of T188 to the graphic configuration of T612 and to T613 is evident, but since neither of the latter graphemes appear in Classic texts, it is difficult to discern which of these two glyphs is the later version of T188. Both T612 and T613 appear in the codices in glyphs which are almost identical to the noun components of the "inaugural" prepositional phrase (T168:188 and T168:612 or 613). Of the seventy examples in the codices, fifty-four of them have T612, thirteen of them have T613, and four of them have a grapheme which seems to combine the features of both T612 and T613. Perhaps more important, twelve of the thirteen examples which have T613 as the main sign are found in the Madrid Codex, which is generally accepted as being less accurate than the Dresden. The Madrid Codex exhibits this same confusion between T612 and T613 in another compound (T267:613); in the Dresden, T613 appears exclusively as the main sign in this glyph while in the Madrid, both graphemes appear. In seventy-four percent of the total codical appearances of the T168:612 or 613 glyph, T612 is the main sign. In ninety-three percent of the examples in the Dresden (there is only one exception), T612 is the main sign. The predominance of T612 and the similarity of the T168:612 glyph in the codices to the prepositional phrase of the "inaugural" expression favors an identification of T612, and not T613, as the codical version of the Classic glyph, T188.

Knorozov (1952) identified T612 as Landa's *le* and pointed out the passage on M91a where *lee*, "noose," is phonetically rendered just as in Landa's example. The *lee*, "noose" glyph, is part of a text accompanying the picture of a turkey hanging from a noose trap (Fig. 26a-4). A *le* reading for T188 in the "inaugural expression" is particularly appropriate. In the Yucatecan languages, *le* is the word for "leaf". In Quiche, *le* is not only "leaf" but may also have the following meanings (Edmonson 1965: 65):

lebeh tremble, shake, flutter.

le leaf, feathers, tremble.

le generation, rank, age-group, order.

leel series of generations, a row of people seated in order.

In an analysis of the iconography of the sarcophagus sides at Palenque (Schele 1976; n.d.b), it has become evident that the leaf glyph (T824) which introduces the names and death dates of the ancestral rulers on the sarcophagus edge functions in much the manner inherent in the generation associations found in the Quiche glosses above. Not only are these ancestors named in chronological order as a "series of generations," but the portraits on the sarcophagus side present the genealogically direct members of this series "in order," according to a directional pattern of orientation. A general tree sign, indicated to be a particular species by the attachment of specific fruit, appears behind each of the ancestors.

The association of *le* with "generation" also occurs in Yucatec; *leaan* is recorded in the Motul (547) as "el semejante o ygal a otro, en casta o linaje." *Leaan* is a derived form of *le* similar to *leancil* "echar hojas el arbol o planta" (Pio Perez: 195). The use of *le* or its derivations as a reference to "generations" may be explained by Pocoman terms for "descendents" (Miles 1957: 762). In Pocoman and most Maya languages, terms like "seed," "fruit," "sprouts," "offspring," etc. are used as figures of speech for descendents. "Leaf" is within this category of vegetal imagery and it might be noted that the image, drawn to represent the Xiu family of Yucatan (Morely and Brainerd 1956: 148-151, Pl. 22) shows a tree springing from the loins of *Hun Uitzil Chac Tutul Xiu*, the founder of the lineage. Each descendent is recorded on a leaf shape.

Finally, Saenz (1940: 248) recorded *lei* as the Cakchiquel term for "nation" in the following entry:

lei hilera, fila serie; siglo; nación; comunidad; tribu; lengua; oficio; . . . particula numeral para filas, series. . . .

The function of *le* as a term for files or series of things relates to its function in Quiche. Carmack (1973: 316) commented that *le* is often translated as "generation," but he says it more closely relates to points or nodes on a string. *Role* and *wakle* "would be, '5 successions, 6 successions' (i.e. of ruler or generation)." *Le* is the principal term for "succession" in the *Popol Vuh*. Carmack (1977: 5) commented as follows: "A single term, *le*, is often used to refer to both generations and political successions. . . . Generations and political succession did not correspond to one another, since not only sons, but also brothers and other kinsmen succeeded rulers in office." In Carmack's view, *le* represents the concept of political, as well as generational, succession, and this use of *le* seems to be a survival of the Classic term used for the same concept. *Le*, based on the metaphor of "leaf" and/or "points on a string," is a reference to the succession of the dynasty at each site. It is an alternative metaphor for *t'ulpach* which describes "succession" as "the following of the footprints of the ancestors."

In summary, the T684 "inaugural" expression contains the following components:

1) T683 functions as the verbal affix and may appear infix into the "bundle" or suffixed to it as T181.

2) T59 and T747b are the locative preposition *ti*, and serve as the preposition in a phrase which names the title (or office) assumed in the T684 event.

3) T168 (*ahpo*), T747a and T1000e (*ahau*), T1030m (*batab*) and other equivalent glyphs, record the title (or office) assumed in the T684 event.

4) T188 is Landa's *le* and records "succession" in both the genealogical and political sense. The above titles assumed in this event are ones of "succession."

The "inaugural" expression T684[683]/59.168:188 reads as (verb)-*ah* / *ti.ahpo*: *le* and may be paraphrased as "verb-affix as Lord in the Succession." When T644 'seating' appears as the verb, the para-

phrase is “he was seated as Lord in the Succession.” T684 represents some verbal glyph which is the functional equivalent of T644 “seating.”

One of the examples appearing in the comparative analysis of the ‘seating’ expressions is unusual enough to require special comment. On the west panel of the Temple of Inscriptions, a ‘seating’ event is recorded with a *ta ahpo le* prepositional phrase (Fig. 25q), but this event phrase is associated with a “death” date, not an “accession” date. The apparently conflicting use of a ‘seating’ expression with a death event is resolved by the presence of Lounsbury’s (1974: 16–17) “Q” death event immediately after the *ahpo le* glyph. The ‘seating’ event is carefully specified to be one of death, not accession. The statement may be paraphrased as the “seating” or “placement of the Lord of the Succession in death.” The death qualification may refer to either or both the state of the protagonist of the event and/or the state (i.e., death) of the lineage predecessors he joins in death.

Other Functions of T684

The Codices

All of the readings for the T684 glyph so far proposed have been based on appearances in the Madrid and/or Dresden Codices. My argument is based much more heavily on Late Classic material, but the evidence found in codical occurrences should be discussed.

Madrid 91a–93a (Fig. 26a, b). The ten scenes on M91a–M93a are subdivided by the length of the texts into two groups. In the first group (Fig. 26a), the six scenes include “trapping activities” (by deadfall, noose, and pitfall), the holding of a staff by God M, and an unknown activity in scene 6. The texts accompanying these scenes include the name of the personage in position 3 and the “augury” in position 4. The glyphs in position 2 clearly refer to the objects in each scene since in scene 3, glyph 2 refers to the noose (*lee*)

and in scene 5, the deadfall is represented in position 2. The first glyph must be the verbal glyph and it is T684 prefixed by T11 *u*, perhaps as a third person inflection. The “bundle” event must refer, therefore, to the three different kinds of trapping and to the holding of a staff (perhaps while walking) by God M, and to some unknown activity. Since so many different kinds of activities are represented by the “bundle” event, it may refer directly to trapping, but it may also be much more general in meaning.

In the second group of scenes, two more trapping activities (noosing and caging) are shown. In addition, the first scene shows a male holding a long narrow cloth, and scene 2 shows a figure (perhaps the same as in scene 1) holding a spear-thrower and darts. Each text contains only two glyphs. The second of these is presumably the name of each figure and the first is the verbal glyph. However, in these texts, T181, which appears in suffixed position as a verbal affix, occurs as a prefix to the “bundle.” Since T181, *ah*, is known to record the male article in other contexts, it may function here as an article. The “bundle” event would then be in noun form and both glyphs would record the names of the actors as something like “he the bundled, the peccary.” The infix within the bundle may be T683, but the Madrid drawing is so bad that it is not possible to identify the infix with certainty.

Madrid 74b (Fig. 27). The scene on M74b shows four gods standing beside large pots, each god with one hand inside and the other outside. The activity appears to be either the making of pots or the removal of something from within the pots. Each text consists of two glyphs—the event and its subject. In the first three pairs of glyphs, the figures shown are successively named as subjects of the event, but thereafter, the verb is deleted and apparently to be understood. The verb is a bundle with a knot on top, but the knot is not the expected T60. Since this aberrant knot carries many of the features of the bundle knots on M91a–93a (Fig. 26), I suspect it is the same,

Figure 26a. The r684 passages from Madrid 91a–92a





























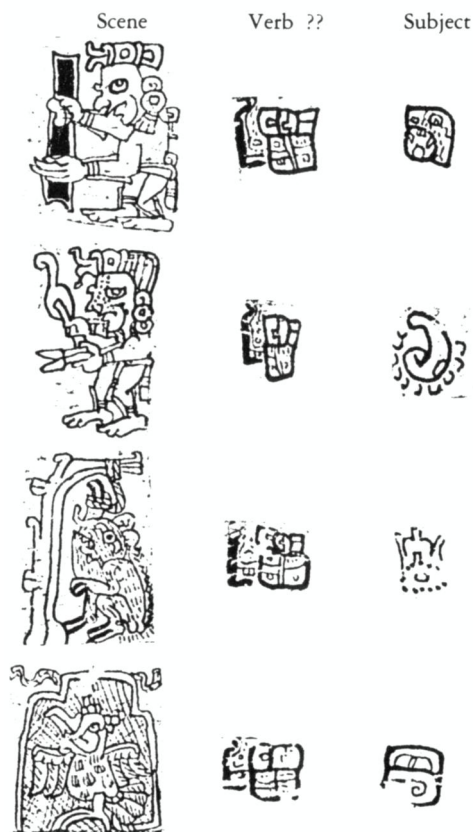
	Scene	Verb	Object	Subject	Result
1					
2					
3					
4					
5					
6					

Figure 26b. The T684 passages from Madrid 92a–93a



and the difference in detail may be attributed to the bad craftsmanship of the Madrid artist. The vertical band of the bundle cloth is turned ninety degrees so that it appears parallel to the sides of the bundle and therefore cannot be seen.

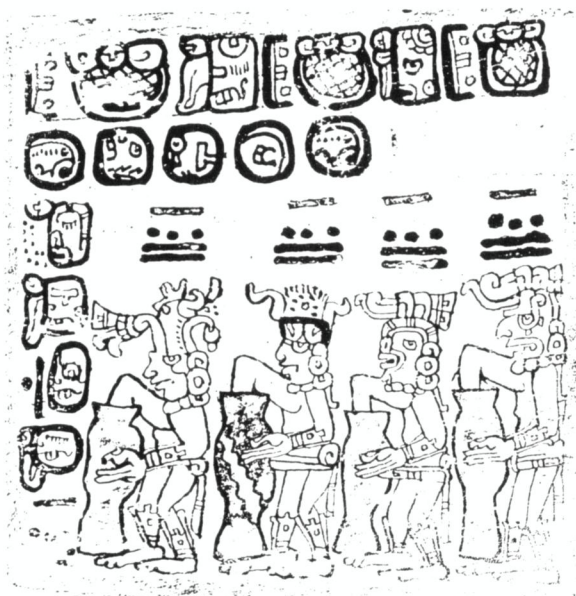
The center of the bundle is filled with wide cross-hatching indicative of nets—so this bundle is net-covered. The lower part of the bundle resembles the Classic glyph that Kelley (1968: 257) identified as the phonetic sign *pa*, but the codical *pa* (T715) does not have cross-hatching. However, net appears prominently in the name of God N in Classical and codical examples where it functions as the *pa* in *Pauatun*. Net or net bag is *pauo* in Yucatec (Motul: 755) and “red de maiz” is *pa* in Mam (Reynosa 1916: 126). I suspect that the net markings were added to the bundle on M74c as a phonetic complement of the sound *pa*.

The Dresden Ring Numbers. The Dresden Ring Numbers have been ignored by all authors who have previously commented on the T684 “bundle” glyph. The “ring” motif is identical to the bundle motifs shown in pottery and monument scenes, and to the T684 glyph. In drawings of the ring motif, the vertical band of the bundle is turned to the side in order to leave a clear space for a numerical infix. As previously mentioned, the ninety degree rotation of the vertical binding cloth has antecedents in Classic representations.

The Ring Numbers in the Dresden-Codex are of two types. The most discussed version is the “ringed” *kin* digit of a Distance Number which is calculated backwards from, or before, 4 Ahau 8 Cumku. In other words, the ring bundle designates that a particular Distance Number leads to a date “before” or “behind” the 4 Ahau 8 Cumku base date.

The second kind of Ring Number is found on D71a–D73a (Fig. 28). This entire section of the Dresden begins with the Serpent Numbers on D69 which establish the base dates for the tables on the following pages. The first set of tables record intervals of sixty-five days from the base date 4 Eb. The second set of tablets begins with

Figure 27. Pot-making, Madrid 74b



the ringed IX (nine) in the lower right corner of D73b. The ringed IX identifies the base date, 9 IX, which is recorded in the same column on D73 and in the Serpent Number on D69. The table proceeds from the extreme left ringed number on D71a in intervals of fifty-four days. The ring motifs in this table mark the numerical coefficients of the tzolkin positions which are reached at the end of each fifty-four day interval. Thus, the rings identify the beginning and end of each interval and the beginning base date of the entire table. The decipherment of $\tau 684$ must allow the bundle to mark Distance Numbers counted “before” 4 Ahau 8 Cumku and, in addition, to mark dates which are at the end and beginning of calendric tables or intervals.

Dresden 23b (Fig. 29). The “bundle” glyphs appear as the verb in the texts on D23b, which are accompanied by a single picture showing Goddess I holding a bowl containing a fish. The first of the six texts clearly refers to this scene since the fish shown in the bowl appears in posi-

tion 3. The fish is followed by a possessed noun, tentatively identified by Kelley (Berlin and Kelley 1968: 14) as “offering” or “gift.” Syntactically, the possessed noun must refer to the fish in position 3, and $\tau 1$, the possessive pronoun, must refer to Goddess I, who is named in positions 5 and 6 and who is also pictured in the scene. In each of the following texts, a different object is named in positions 3 and in each case, this object is followed by “her gift.” However, the name of the possessor is deleted and only to be understood from the context. The last glyphs of these texts may be paraphrased as: “fish, the gift of Goddess I”; “torch, the gift of [Goddess I]”; “turkey, the gift of [Goddess I]”; and so forth.

Since Goddess I functions as the logical antecedent of the possessive pronoun u , she cannot be the subject of the “bundle” event. Instead, the “gifts of Goddess I” syntactically are the object of the verb and the subject is named by the glyph in position 2. The first text may be paraphrased as follows: God N . . . did something to . . . the fish, the gift of Goddess I.

Dresden 61–69 (Figs. 30, 31). $\tau 684$ appears as the verbal glyph in the text to a scene on D67a (Fig. 30, Scene 9), in which God K is shown hanging in a blue and white rope held by God B. The name glyph of God K appears in the text at position 2, and God B is named at positions 3 and 4 (Fig. 31 Text 9). The syntax here and in the twelve other scenes is verb-object-subject, and $\tau 684$ represents an action by God B upon God K.

Glyph F of the Supplementary Series (Fig. 32)

Glyph F is the glyph which accompanies the name of the Lord of the Night, appropriate to a particular written date. It is composed of three graphemes and their substitutes. $\tau 128$ is always superfixed to the main sign, and to my knowledge no substitution for it has been identified in the context of Glyph F.

The signs which can appear below the main sign of Glyph F are known to be substitutable in many other contexts. The first, $\tau 23$, is believed

to have been read as *na* because it is frequently attached to words ending in *-an* such as *k'an* (yellow), *caan* (sky), *tan* (center 3), and *atan* (wife). $\tau 1000a$ is the glyph identified by Proskouriakoff (1961: 83) as designating the names of women. The word for "mother" and "señora" in many Maya languages is *na*?, and *naah* is glossed in the Motul (478) as "mujer de gobernador, cacique, regidor, alcalde, tupil." *Na* appears in the Yucatec naming system in the *naal*, the name derived from the mother (Roys 1940: 37). The presence of $\tau 23$ and $\tau 1000a$ as a suffix on Glyph F suggests that the word it represents ends with the vowel and consonant *-an*.

The main sign of Glyph F is usually $\tau 60$, the diagnostic knot of the "bundle." The identification of $\tau 60$ as the equivalent of the bundle seems to be supported by the substitution pattern for

$\tau 60$ in Glyph F. In the painted inscription from House E at Palenque, and on Stela 8 at Dos Pilas (Fig. 32d), a jaguar bundle or throne pillow replaces the knot. On Stela D at Copan, a similar object, but one more closely resembling a bundle than a pillow, is carried in a tumpline by G9 of the Nine Lords of the Night. Thus, the $\tau 60$ knot can be replaced by a jaguar throne pillow, which surely refers to the throne itself, and by the act of carrying a jaguar bundle in a tumpline. The throne and the bundle knot may both refer to the office or the power of the particular Lord of the Night or to his enthronement and his holding of the bundle. Cargo carrying is also documented as a reference to the execution of political office, and Glyph F as the bundle, the throne pillow, and the tumpline all seem to refer to the Lord of the Night as "in office" for his particular night.

Figure 28. Dresden 69–73

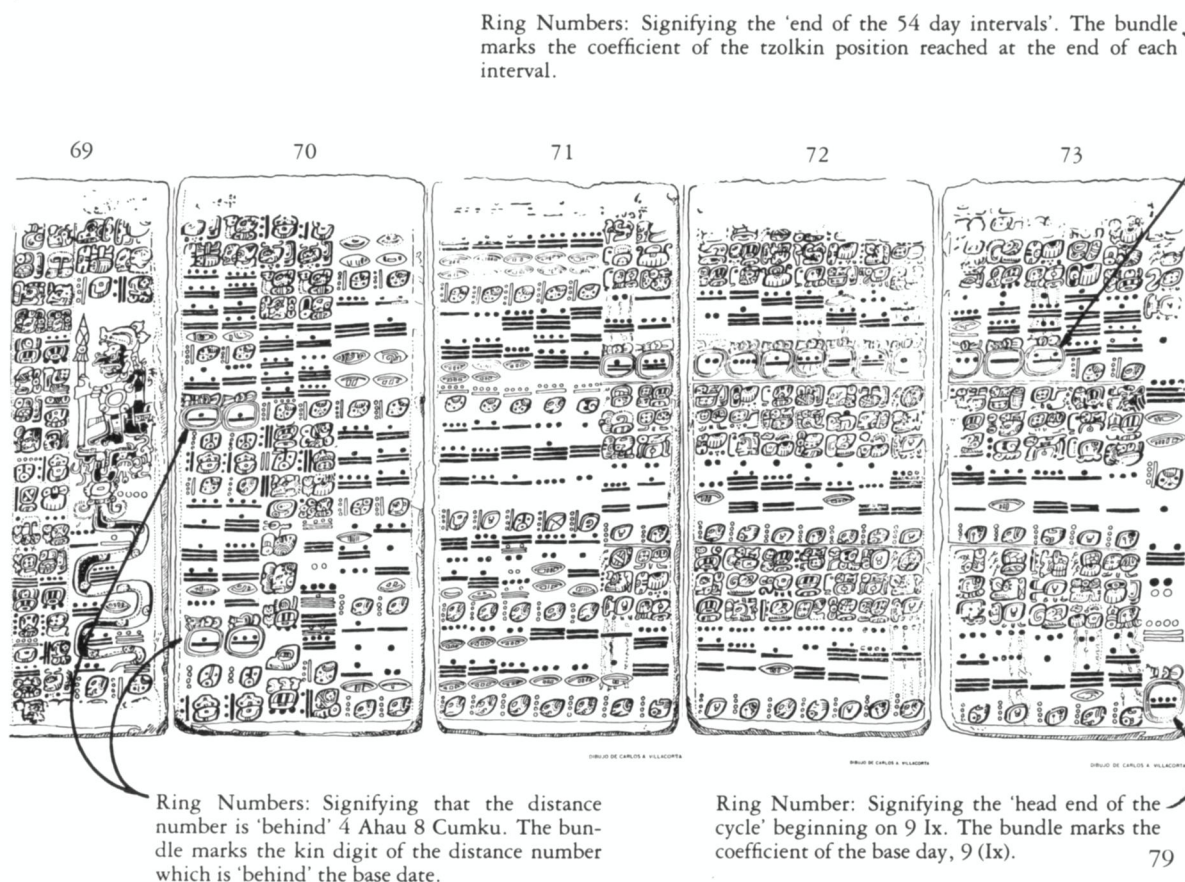



























Figure 29. The T684 passages from Dresden 23b

Scene		Verb	Subject	Object	Her Gift ??	(Moon Goddess)
	1					
	2					
	3					
	4					
	5					
	6					

T60 may also be replaced by the T740 “birth” frog head and by another zoomorphic head (Fig. 32b). At present, I know of no adequate explanation for the substitution of these two heads.

Summary of the Contextual Evidence

In summary, the analysis of the graphic identification and the structural and syntactical context of T684 in the codices and in the “inaugural” expression establish the following set of clues toward the decipherment of the “toothache” glyph:

1) The T684 glyph represents a “bundle” of the kind shown in palace scenes, in the blood-letting sequence at Bonampak, and on the lintels of Yaxchilan. On the Uaxactun Initial Series Pot and La Florida Stela 9, the bundle seems to contain pot-

tery vessels which have been identified archaeologically as cache vessels.

2) The verbal component of the “inaugural” expression was the “bundle” glyph. The most frequent glyph enwrapped by the bundle is T683, the unsuppressed version of the verbal affix *-ah* (T181). However, the head variant of *ti* (T747b) and other glyphs may also appear as the bundle infix.

3) The “bundle” verb is followed by a prepositional phrase which also follows the T644 “seating” verb. The prepositional phrase contains a locative preposition, *ti* (T59 or T747b), *ta* (T103), or T53; the title or office assumed in the accession rite, *ahau* (T1000e or T747a), *ahpo* (T168), *batab* (T1030m), or other titles; and *le* (T188) as a term for “succession.” T188 is eliminated from this prepositional phrase when certain titles, such as T1030n (the Jester God) are used, but the consis-

tent presence of a locative and of a title in this prepositional phrase suggests that any decipherment of T684 should appear in documented accession expressions which include a similar prepositional phrase.

4) The presence of the "bundle" glyphs as a verb in the codices suggests that it should refer to the following kinds of activities:

- a) hunting or trapping by pitfall, deadfall, noosing, and caging;
- b) the taking or holding of a narrow piece of cloth, a spear or staff, or a spear-thrower and darts;
- c) the holding or hanging in a rope of God K by God B;
- d) The taking or receiving by various gods of offerings or gifts possessed by Goddess I;
- e) the making of pottery jars or the removal of something from jars.

5) The "bundle" appears as a "ringing" motif used in the Dresden Codex to mark Distance Numbers counted "before" 4 Ahau 8 Cumku and to mark the beginning of a calendric table and the starting and ending point of intervals within a table.

6) The knot which characterizes the T684 "bundle" appears as the main sign of Glyph F, which seems to indicate that a particular Lord of the Night is in office or in power on a particular date.

7) The bundle knot appears prominently over the *ahau* of the belt motif which marks rulers and the knot may replace the mat and mirror signs which usually appear below the *ahau* and/or jaguar heads. The substitution of T60 for the mat and mirror signs in this motif, and for the jaguar throne in Glyph F, is evidence that the "bundle" may be implied by the T60 knot alone.

The Proposed Decipherment and Linguistic Evidence

Taack (1976: 47-48), in his discussion of the T713/757 "accession" expression, proposed the

reading *pach* of the T713a verb. I accept his reading and his argument, but in addition, I suggest that *pach* (or its cognate *pat*) was also the "reading" of the bundle glyph, and that the "rear of the hand" and the "bundle" glyphs record the same word. However, I believe that the two glyphs were derived graphically from different visual metaphors: T713 from the "rear view of a hand" (*pach k'ab*) and T684 from the "tribute bundle made of bark cloth" (*pach* or *pat* and *patan*). *Pat* is part of a set of homophonous words which incorporate a rich and varied set of meanings, as the following examples demonstrate:

1) In the Yucatecan languages the word for "back" (*espalda*) is *pach*, but in the Cholan languages, Tzeltal, Tzotzil, Tojolabal, and Chuh "back" is *pat*, the cognate to the Yucatecan *pach* (see Table 1).

2) In all of the languages above, *pach/pat* becomes the word for "behind," although in some of the languages *pat* must be preceded by a preposition in order to mean "behind," as in *ta pat*, "to the back." However, in Chol, "behind" does not require a preposition and it may occur as *patan* as in the following examples (Schele, field notes, 1979):

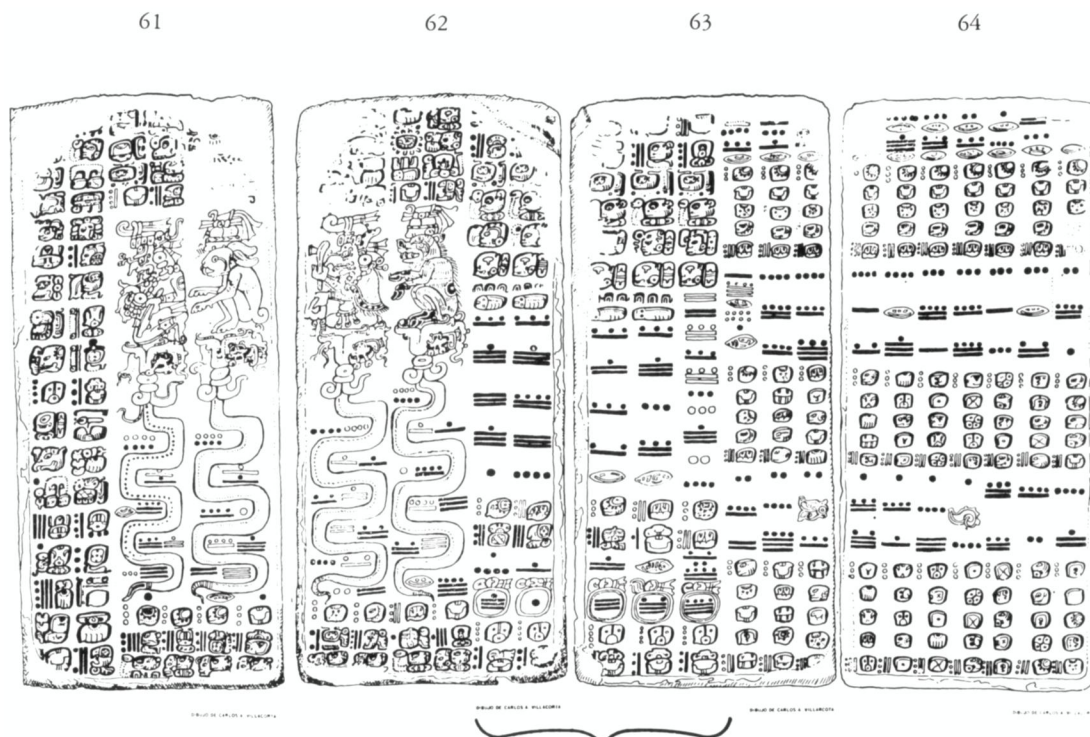
yalobil mih tîp' patañ ʔi ña The son follows behind his mother.

mi k-tîp' patañet I follow behind you.

Kaufman and Norman (n.d.) have reconstructed *pat* as the relational noun in proto-Cholan for "behind," and have determined that it and similar directionals may occur alone or with a preposition. This observation will be important to later arguments.

3) In Yucatec, *pach* and *pat* are associated with cloth, especially the cloth made to give as tribute. The association of *pach/pat* with tribute cloth seems to concern the surface or texture of the cloth and it may well derive from the function of *pach/pat* as bark, a material from which cloth was made. In the Motul (733) *pach* is glossed as "lo largo de la tela, o de la manta de tributo, etc."

Figure 30. Dresden 61-69



Ring Numbers: Signifying that the distance number is 'behind' 4 Ahau 8 Cumku.

and in the Pio Perez *pati* is “mantas estrechas y de dos varas y media de largo que se hacian en la pais para pagar tributo.” An entry in the Vienna Dictionary may partially clarify the cloth associations with *pach/pat*. Under glosses for *manta* of different types are the following entries (Vienna: 142r-143r):

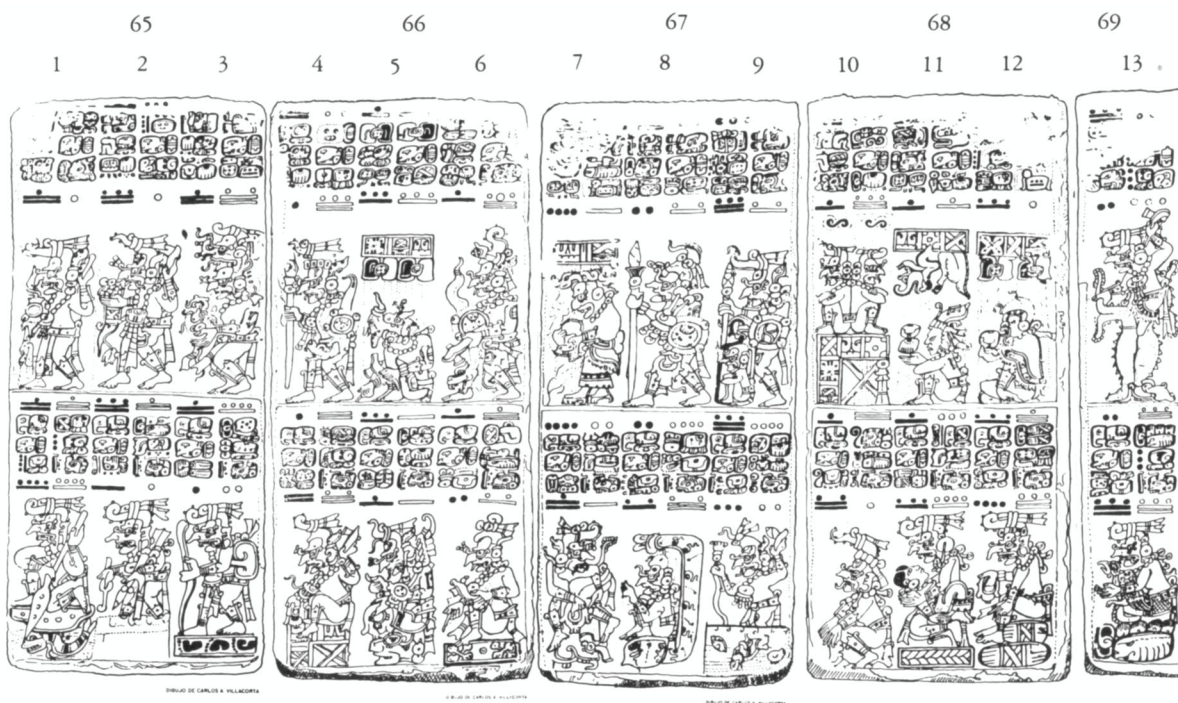
manta de tributo que pagan los indios *yubte*.
manta de tributo batonado *baxa . . . ach*.

Although the center of the second entry is destroyed by a water stain, it seems to be a reference to bark cloth since *bax* means “to beat cloth.” The closest approximation I can find in English to *batanar* is “to full or felt” cloth, a process which involves wetting and beating fibers. This process almost surely refers to the making of bark cloth. It suggests that the *ach* at the end of the entry is *pach*, perhaps naming the surface of this special cloth, or naming the bark from which

it is made. Not only is *pach/pat* the word for bark in those languages which have *pat* as the word for “back,” but in Cakchiquel (Saenz 1940: 301), *pachaj* is “descortezar [to strip off bark].”

Therefore, *pach* is a term which not only refers to the length and surface of tribute cloth, but is the word for “bark.” It seems to be related to the bark cloth used for paper, in blood-letting rites, and as special tribute cloth. It should be noted that the “bundle” motif is known to be associated with blood-letting rites in the Classic period; in the two instances when the contents of the “bundle” are revealed, cache vessels (perhaps associated with offerings and “tribute” to the gods) are shown.

4) *Pach* is associated with “bundle” through its appearances in expressions for “enwrapping and surrounding” an object. This kind of association occurs in Yucatec, Quiche, and other Maya languages as follows:



Rodear cercando alrededor *bakpachil* (Vienna: 181r).

bakpach, *bakpachil* circunferência o alrededor de algo (Pio Perez: 18).

bakpachtah rodear, cercar, sitiar, circundar, amarrar al rededor (Pio Perez: 18).

pachil envoltura (Rivard: 885).

rededor *pach*, *balpach* (Solis Alcala: 490).

Quiche (Edmonson 1965: 84):

pacheh set (of a hen), be in jail, *cover*, embalm, press, squeeze, *drape*.

pachik draped.

pach q'ab gloves.

Pach also appears in the "bundle" question, from the "Interrogation of the Chiefs" as follows:

Heix ca bin a talez tene oxlahun yal u taz, tii teppan u pach y zac potz.

Roy's (1933: 91) translated *tii teppan u pach* as "wrapped up" and *zac potz* as "a coarse white

cloth." The Motul (849), however, glossed *tepp* (*tep'*) as "envolver niños y cubrir envolviendo con ropa y amortajar los muertos" (to bundle or wrap up children and to cover enwrapping with clothes and to shroud the dead). *Teppan* is "cosa que está envuelta o liada con ropa y cosa amortajada." *Zac* is the word for "white," but *potz can* and *potz can kuch* is "hilo basta y gruesa" (coarse and thick threads) (Motul: 776). *Zac potz*, therefore, seems to refer to coarse strings used to bind the bundle, and *u pach* must refer to either the surface of the bundle or to its shrouding cloth. The term *teppan*, used to describe the bundle, is the same as that used to describe both the bundling of children and the shrouding of the dead. One such burial bundle is reported at Tikal by Coggins (n.d.) and it should be noted that *pach* is glossed in Quiche as "shroud." The "bundle" image and the lexical items used to describe it in the *Chilán Balam* question match the

Figure 31. Structural analysis of the texts from Dresden 66a–69a

	Verb	Object	Subject	Result?
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				

Classic “bundle” very closely and include the word *pach*.

The following lists summarize the comparative lexical data from the various Maya languages and features those entries which will be of particular importance to later arguments. The lexical list is followed by a table comparing the *pach/pat* roots in most of the Maya languages:

CLOTH

Yucatec:

pach lo lado de la manta de tributo (Motul: 733).

bax . . . ach manta de tributo batonado (Vienna: 143r).

pati mantas estrechas y de dos vara y media de largo que se hacían en la país para pagar tributo (Pio Perez: 271).

Chol:

we-pat cloth, towel, veil, *rebozo* (Attanasi n.d.: 332–333).

Tzeltal:

patih manta delgado . . . ; *patan noc* manta de tributo (Guzman: 84r, frontis).

Tzotzil:

pativih white shawl/worn by ensign-bearers on the Fourth Friday of Lent, Wednesday of Holy Week . . . (Laughlin 1975: 269).

pativil pok' thin cloth (Laughlin n.d.: 268).

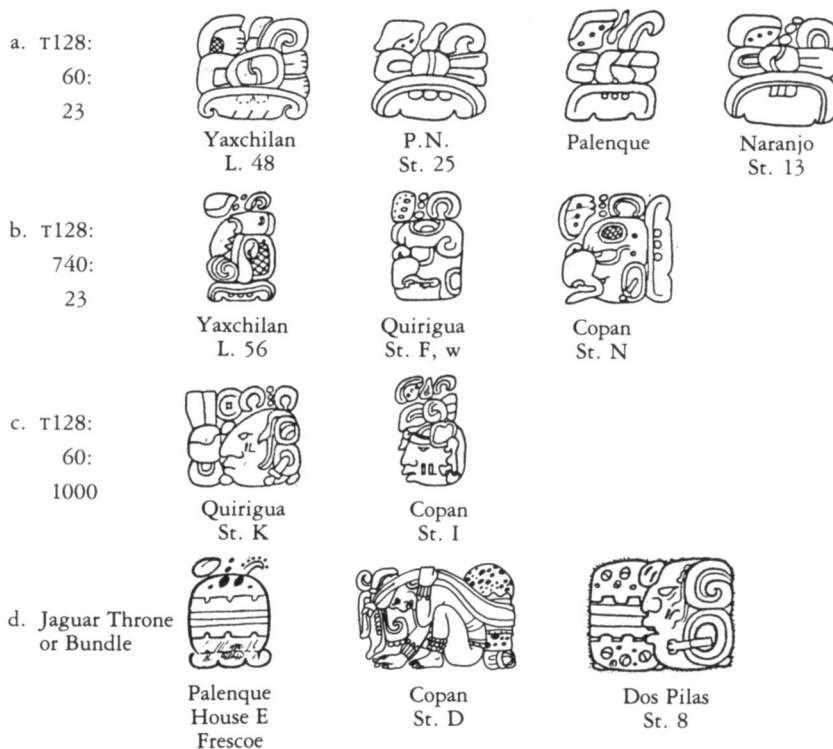
BARK (or surface of something, cover, shroud, enwrap, etc.)

Chol:

pat outer surface, back.

pat buʔul bean pod.

Figure 32. T60 and Glyph F of the Supplementary Series



Tzotzil:

patil shell/egg, rind/fruit, bark/tree, pod/
bean, shell/snail, armor/armadillo. (Laughlin
1975: 268).

Jacalteco:

patz'a to peel off bark (Day n.d.).

Quiche:

pach cover, a kind of meat tamale.

pach q'ab gloves.

pacheh cover, drape (Edmonson 1965: 84).

Cakchiquel:

rih che corteza (Saenz 1940: 127).

pachaj tu decortezar, despellejar (Saenz 1940:
301).

TRAPPING AND CAGES

Tzeltal:

patal es unos angarillos en que llevan las vasi-
jas de vinos (Guzman: frontis).

Yucatec:

(ix) *pat* trampa para pescar; *pat* trampa para
peces (Barrera Vasquez 1980: 633).

patal, patal che gallinero portatil para conducir
gallinas (Pio Perez: 270).

paatal as angarillas en que llevan los indios gal-
linas, acuestas, iguana y otras cosas (Motul:
752).

Quiche:

patah snare birds.

pat get struck, set noose or snare for animals,
rope for wild animals.

pata trap.

patal saddle bag, pack saddle (Edmonson
1965: 86).

Cakchiquel:

pata ru trampa para coger animales (Saenz
1940: 305).

Pocomchi:

pachbal verbal de *pacheh* que significa entre
otra cosa, armar trampa el raton y de agui
pachbal cho ratonero aquel instrumento que
cae encima el raton que lo coge debajo (Po-
konchi de San Cristobal de Cahcoh).

HEAD OR TAIL END

Yucatec:

allende, altra *hun pach* (Solis Alcala: 35, 561).
pach cosa final, ultima, postrera o cabeza
(Motul: 733).

Tzeltal:

patil cosa postrera, postrera (Guzman: 84r).

Tzotzil:

ta patil at the end, the last/ person in line
(Laughlin 1975: 268).

TO HOLD OFFICE OR TO SERVE

Yucatec:

patba ti batabil, etc. hacerse cacique (Motul:
752).

Cholti:

oficio *cahnib; patan* tambien (Moran: 48).

tener obligacion *chilel tapat, tenel tapat* (Mo-
ran: 64).

tengo obligacion *tin-pat* (Moran: 64).

Tzotzil:

patan business, high position, income, job,
office, state of being busy, tax, tribute, war
(Laughlin n.d.: 435).

Tzeltal:

patan tribute, negocio, trabajo (Guzman: 84).

Quiche:

patan service, serve (Edmonson 1965: 86).

patan berufen sein, berufung, aufgabe, pflicht,
amt . . . (appoint to an office, vocation,
duty, etc.) (Schultze-Jena 1972: 261).

Cakchiquel:

patanij ru ejercer algún cargo público, aceptar
algún cargo; hacer algún servicio, servir a
otro.

patanon el que ejerce algún cargo publico
(Saenz 1940: 306).

oficio propio de hombre *patan*.

oficio, tener assi o exercitar *tanqui patan*.

oficio arte para vivir *patanihic*.

oficio público *ah patanoma, patinamit* (Cakchi-
quel, Amer. 7: 186v).

TABLE 5. PACH/PAT ROOTS

	"back"	"behind"	"cloth"	"bark" or "covering"	"office" or "to hold office"	"tribute"	"to mold "with clay"	"to lie flat"	"cage" "trap"	"tumbleline" something"	"end of something"
YUCATEC	pach	pach	pach, pati	pach	pat	patan	pat	pachhal	patal, pat	tab	pach
ITZA	pach	pach		pach		patan	patal				
CHONTAL	pat	pat				patan		pat-e			
CHOL	pat	pat, patan	we-pat	pat		patan	pit			tahm, tahb	
CHOLTI	pat	pat		pat	patan, tapat, tinpat	patan					
TZELTAL	pat	pat	patihuh	pat	patan	patan		patal		pek', patal*	patil
TZOTZIL	pat	ta pat	pativil	patil	patan	patan	pat			pek', tabul	ta patil
CHUJ	patik	pat				patan					
JACALTEC	itzi			patz'a†							
QUICHE	ih	ih		ih, pach†	patan	patan		pachal	patah	patan	
CAKCHIQUÉL	ih	ih		ih, pach†	patan	patan		pachal	pata	patama	
POKOM	ih	ih		ih	patan†	patan		pach	patal		
KEKCHI	ih	ih		pat (scab)			pac'oc	pachab	tab		

*"patal" llevar sus carguillas los indios" (Guzman: 83). mich

†"to strip off bark" or "to skin."

‡"patan" dice tambien el oficio que tiene, ora de servicio personal . . . tambien oficial en cargo y oficio real en la republica, y que tiene el cargo de algo que sirve" (Pokomchi of San Cristobal de Cahcoh).

As a verb in Yucatec, *pach* is glossed as “apropiar, tomando posesión, o tomar para sí o escoger o elegir apropiando así” (Motul: 734) and “poseer” (Solis Alcalá: 464). To take or possess a title or office seems an appropriate way to describe an act of accession, and these meanings certainly fit some codical occurrences of the “bundle” verb. However, the Yucatec word *pat*, which means “to make thing of clay” and “to declare” (Motul: 752), appears in reflexive form in an “accession” expression which is very close to the “inaugural” expression. *Patba ti batabil* is glossed as “hacerse cacique” (Motul: 752). Furthermore, *patan*, the word for “tribute” in almost all of the Maya languages, is the word for “office,” “to hold an office,” and “to execute a public cargo” in Choltil, Tzeltal, Tzotzil, Quiche, Cakchiquel, and Pokonchi.

The lexical data so far presented give evidence of a group of roots (which would have been homophonous in the Cholan and Tzeltalan languages during the Classic period) which includes the followings meanings: “back”; “behind” and “the end (at the head or tail)”; “to mold things of clay” and therefore “to make” and “to declare”; “the bark of trees” and perhaps “bark cloth”; the “outer surface” of things, and therefore, shells and shrouds (like the shrouding cloth of the bundle); “tribute” paid to the lords and perhaps by the lords to the gods; and, finally, “to hold an office or cargo” and “to serve.” The function of the r684 “bundle” event, in all of its contexts both Classical and codical, can be explained by the set of meanings above.

The Origin of the “Bundle” Grapheme and Linguistic Evidence

The r684 grapheme has been shown to correspond to the “bundle” that appears frequently in palace scenes and that is associated with accession and other rites throughout the Classic period. These bundles have been recorded ethnohistorically as sources of political and dynastic power and as part of the legitimization procedures for

high office. The descriptions of these bundles vary in the Quiche and Yucatec sources, but in both they are shrouded by an outer cloth and bound by cloth or string. *Pach* is the Quiche word for “shroud” and it appears in the Yucatec description of the bundle as *tii teppan u pach*. *Teppan* is itself the shrouding of the dead.

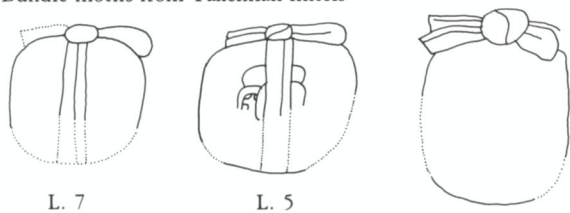
In the instances during the Classic period where the contents of the bundle are revealed, they are shown to be the double plate cache vessel on the Uaxactun Initial Series pot; a specialized cache vessel on La Florida Stela 9; and a blood-letting vessel with its regalia in the Bonampak murals. Furthermore, I think that the bundle can be associated with accession scenes at Palenque in which effigy gods are presented on folded cloth; the cloth itself is the outer shroud of a bundle that has been opened in the accession ceremony (Fig. 33). In addition, the footprinted cloths on the “ascension” stelae of Piedras Negras may well be related to bundle iconography. Long narrow cloths like those shown at Palenque and Piedras Negras appear in pottery and monument scenes as being given by secondary figures to dignitaries. Long pieces of cloth are associated with sacrificial victims whether they are identified as involuntary captives or as voluntary lords. Most of these contexts point toward offerings by subordinates to lords, and by lords to the gods; in other words, it is tribute. *Pach*, “lo largo de la tela de tributo,” and *pati* is the tribute cloth. *Pach/pat* the word for “bark,” may well have been associated with bark cloth. The act of enwrapping and shrouding a bundle is recorded as *tii teppan u pach*, *bakpachal*, or *pach*. And finally, the word for “tribute” is *patan*. These different terms are not homophonous in Yucatec, but they all would have been *pat* in the Cholan of the Classic period.

The “Inaugural” Expression and Linguistic Evidence

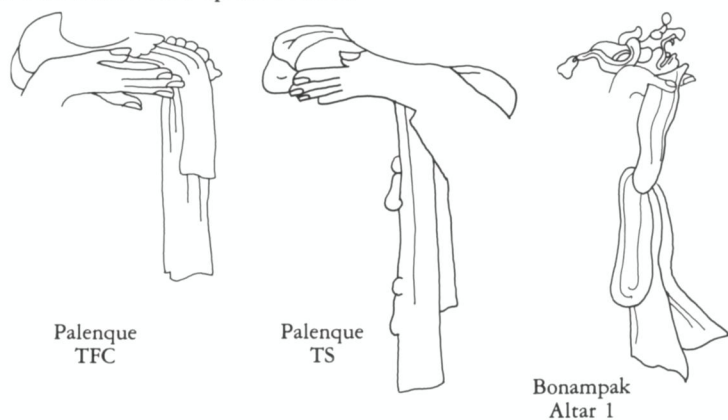
The structural analysis of the “inaugural” expression favors no one proposed reading over another. The analysis suggests that the “bundle” verb should be followed by a prepositional phrase

Figure 33. Bundle motifs from Classic monuments

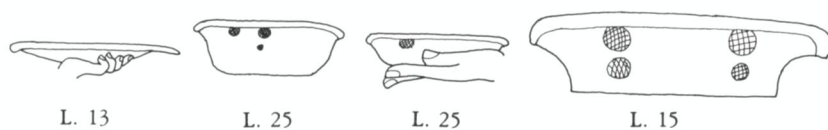
a. Bundle motifs from Yaxchilan lintels



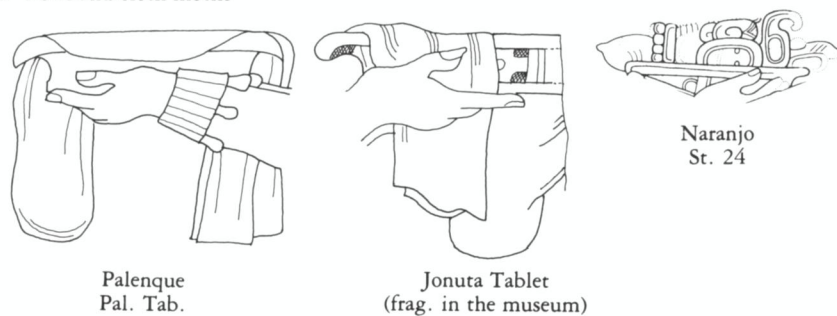
b. Cloth motifs from 'opened bundles?'



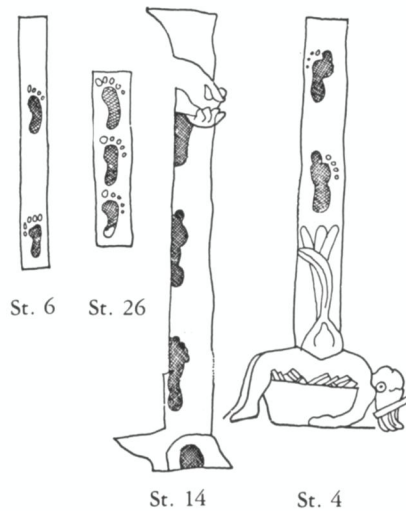
c. Bowls from blood-letting scenes at Yaxchilan



d. Bowl and cloth motifs



e. Cloth and footprints from Piedras Negras 'ascension' stelae



which includes the title or office taken in the accession rite, but all of the proposed readings have this feature. In fact, most accession phrases now known from Yucatecan, Cholan, and Tzotzilán ethnohistorical sources include a prepositional phrase naming the office. Most of the proposed readings of the T684 “inaugural” glyph and many other documented accession expressions include such a prepositional phrase:

hokol ti uinicil estar puesto en algun oficio de república (Motul: 395).

U petz'ah en ti batabil hizome cacique (Motul: 762).

patba ti batabil hacerse cacique (Motul: 753).

culcinah ti alcaldeil, ti batabil, etc. poner a uno por alcalde, cacique (Motul: 210).

chumvanix ta ahaulel macvaabin Macvaabin was seated in the rulership (Chontal. Smailus: 32).

ʔoch ta ʔojov become king (Tzotzil. Laughlin n.d.: 65).

Although the structural analysis of the “inaugural” expression does not favor any of the proposed readings, I do not think that the identification of T684 as a “bundle” can be ignored. Bundles are too prevalent pictorially, and too important in ethnohistorical documents and in Mesoamerican political process in general, not to have been related to the “reading” of T684. Of the proposed readings, only *pach/pat* can be related to bundle iconography, to tribute, and to a widely distributed expression for “office” and “to take or to hold office.”

Glyph F and Linguistic Evidence

The analysis of Glyph F has shown that the term it represents ended in *-na* or *-an* and that its main sign could be the diagnostic knot of the “bundle” or a jaguar throne. It seems clear that Glyph F recorded the concept of being “in office” or “in power” on a particular day and that the bundle and the thrones were different ways of

saying this. *Patan* not only ends in *an*, but means to be “in office.”

Perhaps the most important example of Glyph F is the full-figure variant on Copan Stela D, which shows G9 carrying a jaguar pelt bundle or throne in a tumpline (Fig. 32d). The object in the tumpline may be a throne pillow, but a small bound bundle is attached to the base of this object, perhaps as a semantic determinative for “bundle.” More importantly, G9 carries this object in a tumpline and the term for tumpline in Quiche, Cakchiquel, Pocoman, and Uspanteca is *patam* or *patan*. In Tzeltal (Guzman: 83r), *patal* is “llevar sus carguillas los indios.” The Copan Glyph F seem to be presenting the same information as the forms which show the bundle or the throne, but the visual metaphor is based on “carrying cargo,” a term homophonous with the “bundle.”

The Codices and Linguistic Evidence

Madrid 91a–93a (Fig. 26). The scenes of noose, deadfall, pit trapping, and caging on M91a–M93a most closely fit Taack’s proposal for T684, *petz'*, “to trap both by noose and deadfall,” but *pat* is associated with all kinds of trapping in the Eastern Mayan languages. In Pokonchi, *pachbal cho* is ratonera; in Cakchiquel, *pata* is “trap to catch animals”; and, in Quiche, *pata* is “trap,” while *pat* is “to set a noose or snare for animals.” I would be unwilling to consider the application of lexical entries from Eastern Mayan to explain scenes in a Yucatec codex if it were not for the Yucatec glosses of *pat*, “fish trap,” and *patal*, “a pannier or large basket in which the Indians carry their chickens, iguanas, and things.” This entry surely refers to some sort of cage, especially since it is also called a “portable chicken cage to move chickens.” The last scene on Madrid 93a shows a turkey inside a wicker cage very much like those described as *patal*. I suggest that *patal* was extended to include all of the “trapping” scenes, and call to attention the

fact that *pach* in Yucatec means “to take possession” of something. It also refers to a length of tribute cloth, while *pati* is the name of the cloth. In all but the trapping scenes, figures are shown holding objects; in the last scene of Group 1 (Fig. 26a) and in the first scene of Group 2 (Fig. 26b) the object seems to be a narrow piece of cloth.

It is obvious that I am proposing that the “bundle” glyph appears as both *pat* and *pach* in the Madrid scenes above and in the Dresden Codex, but there is precedent for just such polyvalency in signs representing words including *ch/t*. T87 is the logograph for tree, but this same sign can be used as a phonetic sign representing the sound *te*, but with no reference to the meaning of “tree.” In the codices, T87 is used as the logograph for “tree,” pronounced *che?* in Yucatec, but it may also appear in the name *Bolon Yocte*, with a phonetic value *te?*. On Madrid 42c, “tree” appears both phonetically as “*che:e*” (Landa’s *che* and *e* signs) and as “*te:e*” (logographic *tree* + Landa’s *e*). I think the same polyvalency existed for the bundle glyph, which came into Yucatec usage from the Classic Cholan system as *pat* and/or *patan*. It retained its original value *pat*, but the bundle in Yucatec was *pach*.

Madrid 74c (Fig. 27). The scenes of M74c have been identified as pictures of pot-making or of the removal of something from within the pot. The verbal glyph has been shown to be a “bundle” surrounded by a net which functions as the phonetic complement *pa*. *Pat* means “to form thing from clay” (or pot-making) and *pach* “to take” something. I suspect the activity shown is the making of pottery vessels and *pat* is the more appropriate reading.

Dresden 23b (Fig. 29). The scene on Dresden 23b shows Goddess I holding a fish in a bowl. Her posture is reflected in the first passage of the text which records in position 3 the glyph for fish. The glyph following the fish is a possessed noun which syntactically identifies the fish as “the gift (or offering) of Goddess I”—informa-

tion which is deleted from the following passages because it is to be understood. The verb refers then to some action completed by the gods named in position 2 toward the “fish, the offering of Goddess I.” Cordan (1963: 75–76) proposed *hok*, meaning “to vow,” as the reading of this verb, but *pach* (“he took it” or “he possessed it”) would also make good sense. The first passage would be paraphrased as follows:

[he] took [it], God N, the fish, her gift, Goddess I,

or

God N took the fish, the gift of Goddess I.

Dresden 61–69 (Figs. 30–31). The ninth scene in Register A shows God B holding God K in a blue and white ropelike object. The *hok* reading for the “bundle” verb most closely matches this scene since in Tzeltal and Tzotzil, *hok* means “to hang.” The text accompanying this scene would be paraphrased as “He hung God K, God B” or “God B hung God K.” However, I am suspicious of “hanging” as a proper description of the act shown, since God K is surrounded by the object. Furthermore, part of his body overlaps the object and he is not hanging, as the bottom of the object rests on the ground. Since the nature of the blue and white object is not known, I believe that *pach* is just as likely a reading as *hok*. The scene may show “enwrapping” or “enveloping,” rather than hanging as a visual metaphor for *pach* as “to take”; the text would then be paraphrased “God B enwrapped God K,” or “God B took God K.”

Scene two of Register A may lend supporting evidence to the *pat/pach* reading. It shows God B holding a net-wrapped bundle almost exactly like those in the pot-making scene on M74c (Fig. 27). The verb above is “God K-in-hand” (T1030e). It is now known that this event glyph functions as an accession expression at Quirigua and Copan, probably as a direct reference to the “taking or display of God K” (Schele n.d.a). T670, the hand with upraised thumb, is “to grasp” or “to hold”

something in the hand. Thus, the "God K-in-hand" glyph, a known accession expression, appears as the verb describing the act of holding a bundle in the hand, and that bundle is marked by net, a phonetic complement for the sound *pa*.

The Dresden Ring Numbers (Fig. 28). The "ring" motifs of the Dresden mark Distance Numbers that are to be subtracted from 4 Ahau 8 Cumku in order to read a date earlier or before the base date. *Pach/pat* is "behind," and the "bundle rings" record that the Distance Number is "behind" 4 Ahau 8 Cumku. In a recent study of Achi temporal concepts and their relationship to hieroglyph writing, Neuenswander (n.d.) made the following observations:

In Achi, the "above" and "in front of" [time] relators both mean "after". . . . The "below" and "in back of" relators both mean "before". . . . Interestingly, this type of positional value system is not unique to the Cubulco Achi. Apparently in Zinacantan . . . as well as among the Kekchi (eastern Guatemala, personal communication with Francis Eachus and Ruth Carlson), time is more often expressed as being "behind" (before) and "in front of" (after) an event than it is as being "underneath" or "on top of" it. The Jacalteco of northwestern Guatemala (personal communication with Jean Stratmeyer) apparently mix metaphors, referring to prior happenings as being "underneath" (as do the Achi) and future happenings as being "in front of" (as do the Kekchi and the Zinacantec).

Neuenswander commented also on "wide geographical distribution of this phenomenon of time relators being spatially oriented around a central element. . . ." These observations indicate that the use of spatial orientation as a temporal description is a widespread feature of Maya languages, and that "behind" is a term often used as a reference to events occurring "before" or in the past. The "bundle" marks Distance Numbers as "before" or "behind" 4 Ahau 8 Cumku.

The second kind of "ring" in the Dresden marks the beginning points of a calendric table and the numerical coefficient of the dates reached by the addition of fifty-four day intervals. In other words, these days mark the "ending" and "beginning" points of each interval. *Pach* is

glossed as "cosa final, ultima, postera o cabeza"; it is the end of something at the head or at the tail.

The T60 Knot and T757

The analysis in Part 2 has shown T757 to be a general and auxiliary verb and a metaphor of "succession" as "follows the footprints" of the ancestors. In these and other contexts, T757 often appears with the T60 knot above the head. It is important to note that T60 appears consistently with T788 (the Early Classic version of T757) and that its appearance seems to have been optional with both glyphs. In other words, the knot represents some optional feature which was associated with T757 at its entrance into the writing system. It is my proposal, based on Kaufman's identification of *t'ul* as a Classic innovation, that at the beginning of the Classic period *umul* was the word for "rabbit," and that T757 entered the writing system as the glyph for *umul*. In Quiche, Yucatec, Lacandon, Chol and perhaps other Maya languages, "to hunt rabbits," and in Yucatec, "to follow animal tracks," are denominal verbs based on "rabbit." In Yucatec, and Lacandon, the "hunt" or "follow" term can be *t'ulah* or *t'ulpach*, "to follow behind." In Quiche, Edmonson (1965: 138) lists to "hunt rabbits" as *umulih*, and I suspect that *-ih* is "behind." The use of the directional term "behind" with *t'ul* and *umul* matches closely the optional appearance of T60 with T757. Furthermore, in Chol, the directional "behind" may appear as *patan*, the term used for "to hold office" (*Yalobil mi t'ip' patañ ʔi ña*: "The boy follows behind his mother").

I have proposed that T757 had two primary functions in the Classic period: 1) as a general and auxiliary verb with the phonetic value *mal*, and 2) as an archaic logograph for "rabbit" used metaphorically as an expression for "succession." I suggest that during its very early use as "rabbit" (both as noun and verb), the directional *patan* used with "to follow" became a conventional part of the T757 graph which was retained after

its specialization into a phonetic glyph. "Behind" was represented by T60, the diagnostic knot of the "bundle," exactly in the same way the binding cloth of the bundle was used to mark "behind" on the Ring Numbers.

I have already discussed the appearance of the bundle in closed form as an accession glyph and in various rituals, and in opened form in the accession scenes at Palenque. Long strips of cloth play important parts in scenes of these kinds, including blood-letting and "tribute" giving. The knot of this bundle may be associated with the "rabbit" for more than linguistic reasons. In December of 1974, Jeff Miller and I observed a dramatic rise of a full moon at Palenque; it emphasized the important

association of moon and rabbit in Maya mythology. When infixed into the "bundle" glyph, the T684 lunar sign functions as the verbal affix *-ah*; and when affixed to T757, T60, the diagnostic knot of the bundle, may function as the directional *pat* (or *patan*), or as a conventional part of the T757 glyph based on its original function as a directional. Both the "bundle" and the "rabbit" are important accession expressions, and it should be noted that the Maya conceived of the rabbit as engraved on the moon so that to see the moon was also to see the rabbit. If one were to wrap the moon in a *pat* "bundle," both the lunar and the rabbit glyphs automatically would be included in the visual and mythological concept.

Part 4: Summary

THIS PAPER has presented evidence for proposed readings of three of the major expressions used in Classic inscriptions to record the accession of Maya rulers. T617a is a “mirror,” read as *nen* in the Western Maya languages, and as *lem* in the Eastern Maya languages. *Nen* is recorded in Yucatec as “the priest, chief, governor of the earth or pueblo who is the mirror in which all see themselves,” and in Quiche as “to succeed in office.” The behavior of the mirror glyph suggests that it could record both accession events for rulers or heir-designation rites for children or adults. As such, it records the taking of office, but the office is specified by additional glyphs, usually in a prepositional phrase which follows the verb. The “mirror” glyph is associated both contextually and iconographically especially with God K, the deity of rulers, lineages, and royal blood-letting, and with the Jester God, a deity of rulership who appears frequently as a marker of rulers.

As a grapheme, T1.757 appears to have been based originally on the Eastern Mayan term for “rabbit,” *umul*. There is good evidence T757 (without *u*, T1) retained its original phonetic value, *mul/mal*, but that it could be read as the locally appropriate word for “rabbit.” At a very early time, T757 became specialized as a general verb, which also appears in auxiliary verb + *ti* + verbal noun constructions. As a general verb, its value appears to have been *mal* (“to go, to result, to pass”), and T1 functions as the third person inflectional pronoun of Set A (transitive verbs). As the glyph for “rabbit” it appears in the prepo-

sitional phrase which follows the T713 + title expression for “accession.” “Rabbit” in Yucatec, Lacandon, Chol, Quiche, and probably other Maya languages, can appear as a denominal verb for “to hunt rabbits” and, by extension, “to follow the footprints of the hunted.” The latter meaning was used as a metaphor for “succession” as “to follow in the footprints of the ancestors,” a concept that is expressed literally on the accession stelae of Piedras Negras as a footprinted cloth leading to the “seat of the ruler.” The most frequent form of this accession expression at Palenque (T58.522:713a/89.1.757) may be read as *pat zac uinic tu t’ul(pat)* and paraphrased as “[he] was made Zac Uinic in the Succession (track of the ancestors).”

T684 is the glyphic form of the “bundle” which appears frequently in monument and pottery scenes and which is recorded in ethnohistorical sources as a memorium left by the “Founding Fathers” as a source of dynastic power, as a part of legitimization procedures for high office, and as the “Heart of God.” The bundle can be associated with blood-letting and accession rites in the Classic period, with sacrificial and burial practices, with tribute, and with “bark” cloth. The full “inaugural” expression includes a prepositional phrase (which may also appear in “seating” expressions) which named the title in the succession in which the ruler was placed. The full expression (T684[683]/59:168:188) may be read as *patah ti ahpo le* and may be paraphrased as “[he] took office as *Ahpo* (or *ahau* or *batab*, etc.) in the succession.”

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